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June 15, 2007 Volume 29 Number 24 www.processor.com



# Harness A Holistic Data Center View

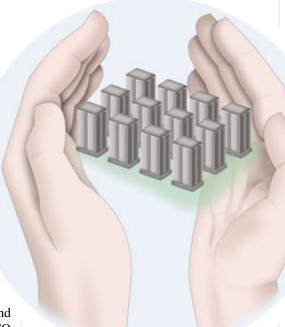
Obtain A Pervasive Perspective To Boost Efficiency

by Christian Perry

In the often chaotic world of the data center, tunnel vision isn't necessarily considered a liability. Without it, managers would be unable to focus on and complete tasks that might otherwise get blindsided by competing concerns. However, moving forward with a singular vision can hurt the data center in the long run, prompting experts to recommend that IT managers approach their data centers with a holistic view.

"IT environments are complex systems of interdependent elements, ranging from software to hardware to facilities and infrastructure," says Andrew Hillier, CTO and co-founder of CiRBA (www.Processor.com/CiRBA1). "This is often taken into account when considering reliability and preventing data failures, as the failure of a single component, without proper redundancy, can often impact data services."

But the impact travels well beyond reliability, Hillier explains, leaving managers



with a holistic data center view better equipped to understand total cost of ownership, the loads on administrators, equipment refresh cycles, and the potential to optimize environments from a footprint, heat, and cost perspective. "Diverse infrastructure areas interrelate, often in complicated and unforeseen ways," says David Cottingham, global practice manager for Dimension Data's Data Center and Storage Professional Services (www .dimensiondata.com). "Without a holistic view of the data center, it is very easy to inadvertently create new problems while attempting to solve an existing one."

#### **Gather The Pieces**

Because a holistic fairy dust doesn't exist to sprinkle over managers who didn't previously have a pervasive data center view, data center managers must create and deploy structured plans to obtain that view. According to Hillier, the process stems from the evolution of

IT systems and environments, where IT as a productivity enhancement engine has made great strides in recent decades, but IT as an engineering discipline doesn't quite make the grade.

"I always joke that you wouldn't fly on an airplane where the repair crew had to reverse-engineer it every time they needed to fix something," Hillier says. "But that's exactly what happens in IT, and it Go to Page 10

# Keyloggers Know They Are Just Your Type

# What Your SME Should Know About Keyloggers

by Curt Harler

**ALMOST EVERYONE OPPOSES** wiretapping or eavesdropping on someone else's phone conversations. But in the age of computers, there is another way to eavesdrop on a person's communications: keylogging.

Keylogging is the capture of the individual strokes typed on a computer keyboard. The key strokes are captured by "keyloggers," which allow a person to reconstruct passwords, documents, emails, and other materials composed on a computer. Keyloggers are one of the most commonly used methods of cyber fraud. They can pose a serious threat to users, resulting in stolen information and data.

There are keystroke loggers . . . and also screenshot loggers, audio loggers, video loggers, and programs that will track what the little USB camera on a computer sees.

According to Shane Coursen, senior technical consultant at Kaspersky Lab (www.kaspersky.com), together with phishing and social engineering methods, keyloggers have become one of the most commonly used methods of cyber fraud.

"The problem is absolutely real, and we should be concerned about it," Coursen says. The main target recently has been banks, but the problem is a concern for any company that has data—either internal or about its customers—that must be kept private.

"I don't think the threat that keyloggers pose is nearly as high as the fear that the antispyware vendors are selling," says

# "The problem is absolutely real, and we should be concerned about it."

- Kaspersky Lab's Shane Coursen

Doug Fowler, president of SpectorSoft (www.spectorsoft.com). "Obviously, a keylogger installed on a computer when management did not request that it be installed has potential for misuse," he says.

To prevent this threat, he says managers must not allow software to be installed without administrative rights. "Give

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#### **COVER FOCUS**

#### Getting A Better Data Center View

What does it take to get a better idea of all data center aspects, including IT equipment, power, cooling, and cabling, and how all those elements work together? We talked with product manufacturers to find out.

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Almost everyone opposes wiretapping or eavesdropping on someone else's phone conversations. But in the age of computers, there is another way to eavesdrop on a person's communications: keylogging.

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Materials have a wide variety of heat absorption capabilities. It's difficult to transfer much heat through air without a lot of airflow, but water is a much more efficient method of transferring heat.

#### **Email Disaster Recovery** | 25

Organizations need to ensure that they are capable of restoring email and other unified messaging systems as soon as possible based upon their business' requirements.

#### **Encryption: Effective Strategies** | 26

In the past two and half years, there have been more than 500 data breaches in the U.S., according to consumer advocacy group Privacy Rights Clearinghouse. Encryption is one way for companies to protect themselves against data loss.

■ 3M introduced the Vikuiti KE Polarizer for the

#### **Product Releases** | 16

3LCD projection display market. ■ Addonics Technologies offers limitless connection possibilities with its new hard drive kit. 

Agilent announced new PC-based software for its N5182A MXG and E4438C ESG vector signal generators. 

elQnetworks introduced the latest iteration of its SecureVue platform, designed to help administrators streamline compliance and manage network and security operations. Fluke Networks released the MicroScanner2 Cable Verifier. ■ IOGEAR announced its Smart link Transfer Cable for Windows Vista. ■ Neobyte Solutions released file backup software, Titan Backup 1.1. ■ Overland Storage announced the REO 9100 D2D VTL, with performance improvements and more capacity and configuration options. ■ Palm has released the Foleo, its first smartphone companion device.

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KVM & CONSOLE ACCESS

## **KVM Just Got Better**

**ATEN Introduces IPMI-Capable KVM Switch** 



THE ABILITY TO CONTROL servers remotely through KVM switches has liberated countless data center managers from their server rooms. But the ability to gauge the physical well being of network servers is not something that KVM switches typically do.

However, ATEN International's new KH98 Health Manager KVM Switch is designed not only to manage systems but also to monitor such physical issues as server fan speed, voltage levels, and CPU temperature remotely using a PS/2 console.

According ATEN, the KH98 is the first KVM switch that provides users with IPMI (Intelligent Platform Management Interface) 2.0 capabilities. IPMI enables users to check on a number of physical issues on as many as eight compatible servers.

In addition to its monitoring functionality, the KH98 enables users to reset and power off and on systems remotely and to hot swap servers without having to power down. It also offers administrator and user password authorization, the ability to manage servers using a combination of front panel switches, hotkeys, on-screen display menus, and an auto scan mode that provides for uninterrupted tracking of user-selected servers.

The KH98 can be used with a variety of operating systems, including Microsoft DOS 6.2 and higher, Microsoft Windows NT 4 and higher, Red Hat Linux 6.0 and higher, SUSE Linux 8.2 and higher, Novell NetWare 5.0 and higher, IBM AIX 4.3 and higher, and any version of IBM OS/2 Warp.

If users want to monitor more than eight servers, up to 73 KH98 boxes may be linked to monitor up to 512 computers from a single console through efficient cascading technology. At the same time, an ATEN product executive says that the KH98 would be an ideal product for the SME space. The health monitoring of servers, no matter how many

are in service, he says, is vital to SME organizations because they, too, rely on email, data processing, and storage, among other things, to run their businesses.

**JUNE 15, 2007** 

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#### ATEN KH98 Health Manager KVM Switch

\$499.95 per unit

Provides users with an IPMI-supported KVM switch that can both manage servers remotely and monitor these servers' physical conditions

(949) 428-1111

www.Processor.com/ATEN



SECURITY

# **Identity-Based Security**

Cyberoam Adds VPN, IM Features To Internet Security Appliance Line

RATHER THAN RELY on IP addresses as the starting point for security checks, the UTM (unified threat management) Internet security appliances from Cyberoam use identity-based tests, according to Joshua Block, vice president of North American operations at Cyberoam, a division of Elitecore. "Cyberoam embeds user identity in firewall rule matching criteria, allowing for customized user-based access policies and effective administrator control throughout the network," he says.

Cyberoam has announced a new version of software for its Cyberoam CR appliances with new, features including Always-On



VPN connectivity, increased control of IM protocols, and CIPA (Child Internet Protection Act) compliance templates.

For sites with a clustered Cyberoam environment, the new Always-On VPN feature for IPSec and L2TP connections will automatically and transparently provide

continuous connectivity if a connection is dropped (for example, due to ISP, router, cabling, or appliance failure). "We can do a VPN failover from one WAN interface to another on the same device, such that all VPN connections fail over," says Block.

In addition, "we can now granularly control activity on IM-type applications like Skype, Windows Live Messenger, and Rediffbol," says Block. "And we're doing this by user, rather than based on IP address."

Because of the increased use of anonymous proxies as a workaround to security, security vendors and IT staff have had to find and block each as it's found. "We've developed an intrusion detection/prevention signature that blocks connections to anonymous proxies," says Block.

**WIRELESS** 

The new features are available on new appliances and as downloads to all customers who have a valid support contract.

#### Cyberoam CR Series

Prices start at \$1,000; purchases include one year of standard 8x5 support and maintenance

Identity-based UTM security appliance that provides user-action level blocking and logging

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APPLICATION NETWORKING

JUNE 15, 2007

## **Application Overdrive**

**Stampede Delivers Speed & Advanced Features** 



THE STAMPEDE APPLICATION Acceleration Series Release 2 boosts performance and availability for Web-based applications throughout the enterprise. As more applications are being ported to the Web, performance and reliability has become critical, especially with more Internet-enabled mobile devices raising the bar for alwayson, always-available resources.

Unfortunately, the strain of these increasingly complex Web-based applications on the enterprise infrastructure has resulted in bandwidth and latency problems.

Stampede's hardware/software solution gives users the choice to address application acceleration in a single- or two-sided posture. The appliance alone offers application firewalling, connection management, SSL offloading, compression, image reduction, static caches, and high availability.

Adding the automated Acceleration On Demand client software enhances performance with true bidirectional acceleration using cache differencing, bidirectional compression, multiplexing of large data objects, and Common Internet File System acceleration. The software helps maintain an uninterrupted user session and protect against data loss through a persistent TCP Layer 5 connection via virtual session in the event of a network interruption.

This release introduces a number of new features. Advanced Virtual Pipelining lets

multiple TurboStreaming sessions share multiple client connections enhancing overall performance. With data surge protection, overloading is eliminated from application servers. As end-to-end encryption grows, Stampede helps reduce the overhead by providing content-based load balancing, allowing a single SSL certificate to be presented to multiple apps. Document delivery is ramped up through advanced PDF optimization and content distribution.

The new release delivers accelerated performance and optimization for HTTP, SSL, AJAX, and XML applications along with newly introduced expanded support for smartphones and PDAs and Linux-based devices.

# Stampede Application Acceleration Release 2

Starts at \$40,000 for the appliance and \$35 per client

Delivers acceleration to enterprise applications through advanced virtual pipelining and persistent network connections

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# Wi-Fi & Spectrum Analysis

Keep Your Network In Check With Yellowjacket

**Combined** 

IMPLEMENTING AND MANAGING a Wi-Fi network requires upfront and continuing analysis of the Wi-Fi spectrum and network packets to ensure that your users have the optimum experience with your SME's Wi-Fi network.

With a custom receiver and software, the Yellowjacket B/A/G, a handheld 802.11/a/b/g Wi-Fi and spectrum analyzer from Berkeley Varitronics, can help you keep tabs on your network.

According to the company, the Yellowjacket is the only true RF (radio frequency) spectrum protocol analysis and directionfinding tool accurate to within 1dB.

The Yellowjacket, which interfaces with the HP iPAQ series of Windows Mobile-based PDAs, demodulates, sweeps, and analyzes Wi-Fi network packets. It measures RF energy and analyzes interference over a 2.4 or 5GHz network wireless Internet Service Provider or Wi-Fi hotspot.

An optional DF (direction finding) antenna is available for the Yellowjacket B/A/G, providing additional functionality, including the ability to locate rogue APs (access points) and interference from other electronic devices. Other device features include Multipath (Ec/Io), Delay Spread, Channel Frequency Response, SSID (Service Set Identifier), and Received Signal Strength Indicator.

Another option available for the Yellowjacket is a 12-channel internal GPS

receiver that timestamps all 802.11 measurements taken by the device. You can then export the measurements into Berkeley's own Dolphin Mapping Software.

The Yellowjacket eases tedious network security tasks, as it can authorize or unauthorize up to 1,000 MAC addresses, generate a valid AP list automatically, and flag invalid APs as suspect.

It can output data to Microsoft Excel spreadsheets and Berkeley's Hive real-time indoor/outdoor mapping solution on the iPAQ with no GPS.

The Yellowjacket B/A/G will be available in Q3 of this year. SMEs can benefit from the Yellowjacket's portability and utility that spans Wi-Fi and spectrum analysis, and the fact that it uses the HP iPaq means the learning curve is going to be short for Windows Mobile users.

#### Berkeley Varitronics Yellowjacket B/A/G

Handheld 802.11/a/b/g Wi-Fi analyzer and spectrum analyzer

732-548-3737

www.Processor.com/YellowJ



## MarketPlace -



### **NEWS**



#### Yahoo! CTO To Retire

IN THE WAKE OF A company overhaul and the departure of several other senior executives, Yahoo! CTO Farzad Nazem announced he will retire. Nazem, 45, had been with Yahoo! for 11 years, serving most recently as the company's CTO and head of the Technology Group, which is responsible for the Yahoo! Web site and product development. In his blog, Nazem wrote that his retirement comes after several milestones, including the reorganization of Yahoo!'s Technology Group and the successful launch of its new Project Panama advertising system, which ranks ads based on relevance and click-through rate. Yahoo! co-founder Jerry Yang will cover Nazem's duties until a replacement is found.

#### Spam King Arrested

A SEATTLE MAN, nicknamed a "spam king' by prosecutors, has been arrested on charges that he and his company sold broadcast email products and services. Robert Alan Soloway, who runs Newport Internet Marketing, faces fines of about \$775,000 and may be required to forfeit other property and money; he faces charges of fraud, identity theft, and money laundering. Prosecutors say Soloway allegedly sent tens of millions of emails advertising his services and sold software that ended up working as a spam tool. He also allegedly created more than 2,000 proxy servers and used stolen email addresses and domain names.

#### EMC Buys Verid

To IMPROVE ITS RSA product line, EMC has purchased Verid, an identity verification services vendor. Terms of the sale were not made public. Although Verid's services, which have been described as a "knowledgebased authentication" product, have been included in EMC's Adaptive Authentication suite for several months. The acquisition will allow EMC to improve the product's integration, which will benefit customers. In addition to its inclusion with the Adaptive Authentication suite, EMC will also add the service to its RSA eFraudNetwork and continue to sell it as a standalone product.

#### Avaya To Be Purchased For \$8.2 Billion

FOLLOWING IN THE FOOTSTEPS of other recent networking and telecommunication

WATCH THE

Sun Microsystems

Symantec

firms that have been bought by private equity firms, Avaya has agreed to be purchased for an \$8.2 billion cash buyout by TPG Capital and Silver Lake Partners. Last month, Alltel was purchased by Goldman Sachs Group's private equity division for \$27.5 million. Although the deal must be approved by Avaya shareholders, the \$17.50 per share offer places a 28% premium on the company's value over the May 25 closing price of \$13.67 per share.

#### IBM Announces More Layoffs

IBM WILL LAY OFF an additional 1,566 employees. This new announcement comes shortly after the company announced it would cut 1,300 employees in early May. The majority of the new losses will come from the company's Global Services business unit, based in the United States. The Global Services group is responsible for taking over certain aspects of a customer's business operations. IBM has been working to restructure the group, including adding new lines of consulting services.

#### Motorola Plans To Lay Off 4,000

AS PART OF THE COMPANY'S restructuring plan to reduce costs, Motorola announced it will lay off 4,000 additional employees. The firm will also implement other cost-cutting moves, such as reducing administrative and general expenses, prioritizing the company's investments, and continuing to use measures for controlling discretionary spending. These moves, combined with the job cuts, are expected to save Motorola \$600 million per year starting next year. Motorola also said that by the end of this month it will complete the 3,500 job cuts it announced earlier this year, slated to save the firm \$400 million annually. Motorola has experienced significant decline in profits in recent quarters.

#### Foundation Won't Punish Novell

THE FREE SOFTWARE FOUNDATION released the fourth and final draft of GPL version 3, the new licensing agreement for Linux, and has decided not to take punitive action against Novell for entering into a patent and software sales agreement with Microsoft. The foundation, which owns rights to a major portion of Linux, had threatened to prevent Novell from distributing software under the new agreement. Some open-source proponents claim Novell's pact with Microsoft undermines Linux patents and does little to persuade companies to adopt both Linux and Windows.

#### Cities Ranked On Disaster Preparedness

A RECENT STUDY BY AT&T Business Continuity stacked up 10 U.S. cities to see

prices and trends for 16 major companies in the technology market.

Company	Symbol	Year Ago	May 30 \$	June 6 \$	% change from previous week
Avaya	AV	\$11.23	\$15.66	\$17.01	<b>▲</b> 8.62%
BEA Systems	BEAS	\$12.65	\$12.63	\$12.74	▲ 0.87%
Computer Associates	CA	\$21.31	\$26.38	\$25.79	<b>▼</b> 2.24%
Cisco Systems	CSCO	\$19.82	\$26.40	\$26.60	▲ 0.76%
Dell	DELL	\$24.06	\$26.22	\$27.35	<b>▲</b> 4.31%
Electronic Data Systems	EDS	\$23.97	\$28.65	\$28.62	▼ 0.1%
Google	GOOG	\$388.14	\$498.60	\$518.25	▲ 3.94%
HP	HPQ	\$33.57	\$45.67	\$46.03	▲ 0.79%
IBM	IBM	\$77.67	\$106.93	\$102.41	<b>▼</b> 4.23%
Intel	INTC	\$18.24	\$22.08	\$21.49	<b>▼</b> 2.67%
McAfee	MFE	\$22.70	\$36.09	\$35.41	▼ 1.88%
Microsoft	MSFT	\$22.55	\$31.11	\$30.29	<b>▼</b> 2.64%
Oracle	ORCL	\$14.29	\$19.42	\$19.35	▼ 0.36%
Red Hat Software	RHT	\$25.53	\$22.95	\$24.17	▲ 5.32%

\$4.14

\$15.81

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\$5.12

\$19.77

\$5.02

\$19.98

**1.95%** 

**▲** 1.06%

how they ranked in their preparedness for natural or man-made disasters. The 10 cities surveyed, in order of their ranking from most prepared to least prepared, were New York, Houston, San Francisco, Boston, Memphis/Nashville, Atlanta, Chicago, Los Angeles, Minneapolis/St. Paul, and Cleveland. AT&T surveyed 1,000 corporate IT managers throughout the 10 cities and based its rankings on each city's business continuity plan, its employment of those educated about the plan and systems installed to implement the plan, and its use of managed security and cybersecurity policies.

#### IPS Reduces Downtime Costs

INFONETICS RESEARCH found that having a network-based IPS (intrusion prevention system) can reduce costs resulting from security downtime in businesses, according to a recent announcement by McAfee. The report examined both revenue and employee productivity losses caused by malware and DoS attacks. Small enterprises faced losses of \$30,000, or 0.4% of annual revenue, in security downtime costs, while losses in medium-sized enterprises were \$225,000, or 0.5% of revenue. In addition, the report showed that businesses that implement IPS can expect to see an estimated 65% decrease in downtime hours due to DoS attacks.

#### RFID Survey Shows Lack Of Trained Staff

"THE STATE OF RFID," a survey that the Computing Technology Industry Association conducted, reveals companies' adoption of radio frequency identification is hindered by a scarcity in staff trained to use the technology. Of the systems integrators, value-added resellers, and technology resellers at the 64 firms polled, 69% said there's "an insufficient pool of talent" for recruiting; of those respondents, 68% said they think RFID adoption will be slower because of the lack of trained employees. The companies also said what their leading challenges were for RFID: acquiring customers for RFID offerings, educating and training workers, and handling initial challenges when implementing RFID technology.

#### Government Lacks Data Protection

A YEAR AFTER THE U.S. Department of Veterans Affairs reported a laptop and hard drive stolen (and later found), a number of U.S. government agencies still do not have proper protection plans for teleworking employees, says the Telework Exchange. The organization released a study showing 58% of government workers unofficially work from home on evenings or weekends, 54% of whom take files home with them. Following the VA breach, less than 50% of agencies offered security training to workers, while more than half failed to update their protection and encryption technologies. However, the study did find official teleworkers' computers have increased data security: 94% have antivirus on their laptops, while only 75% of unofficial teleworkers did.

#### McAfee Reports Search Results Risks

ACCORDING TO MCAFEE, certain search engines are more likely to direct users to risky Web sites through search results than other engines. McAfee examined the first five pages of search results from AOL, Ask.com, Google, MSN, and Yahoo! for about 2,300 common keywords and compared the links to sites in its Web safety database, which contains Web pages known to contain malicious threats or risks. America Online has the safest search results, returning risky links 2.9% of the time, while Yahoo! has the riskiest, offering such links 5.4% of the time. Overall, McAfee found that about 4% of search results are risky, down from 5% last year.

## Upcoming IT Events

#### - JUNE -

HP Technology Forum & Expo 2007

June 18-21 Las Vegas, Nev. www.hptechnologyforum.com . . . . .

InfoComm07 June 19-21 Anaheim, Calif. www.infocommshow.org/html

Seattle ITEC 2007

June 20-21 Seattle, Wash. www.goitec.com

#### Indianapolis ITEC 2007

June 27-28 Indianapolis, Ind www.goitec.com

#### - JULY -

SANSFIRE 2007 July 25-August 3 Washington, D.C. www.sans.org

#### - AUGUST -

National Institute of Governmental Purchasing

August 4-8 Hartford, Conn. www.nigp.org/events/forum.htm

#### . . . . . LinuxWorld Conference & Expo

August 6-9 San Francisco, Calif. www.linuxworldexpo.com

> SHARE August 12-17 San Diego, Calif www.share.org

**Business & Technology Solutions Show** 

August 21-22 Rosemont, III. www.btshow.org

. . . . . Gartner Financial Services **Technology Summit** August 27-29

New York, N.Y. www.gartner.com/it/page.jsp?id=498092 &tab=overview

Gartner Enterprise Planning & Architecture Strategies Seminar

August 28-29 New York, N.Y. www.gartner.com/2\_events/conferences /epas073.jsp

#### - SEPTEMBER -

Enterprise Architecture 2007 September 5-7 Washington, D.C. events.fcw.com InfoSecurity

September 11-12 New York, N.Y. www.infosecuritvevent.com

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## **SIX QUICK TIPS**

# Make Fire Protection More Than An Afterthought

by Drew Robb

FIRE PROTECTION IS something others usually take care of. When a company purchases a building, the seller addresses code compliance. A rep from the fire extinguisher vendor verifies all gear is properly functioning. Fire safety rarely becomes an issue for IT, but it should be. A fire is just as likely to occur as the various security incidents that might crop up. It makes sense, therefore, to give the subject of fire protection some attention.

#### **Use Multiple Layers Of Protection**

Protecting computer rooms from damage caused by smoke, fire, or water is best done

#### Best Return On Investment: Follow System Sizing Guidelines

Most codes include rules as to how much of a particular fire protection technology to install in a given space. Pay attention to these stipulations and make sure building modifications don't inadvertently reduce these safeguards below code.

"Portable fire extinguishers, for example, are rated by size and type," says Sanford Stuart with Computer-Site Air Conditioning & Fire Protection (www.computer-site.com). "A minimum of one extinguisher properly sized and rated should be installed every 50 feet and located in the path of egress."

in multiple layers. The physical shell of the computer room should be fire-rated, including all walls, doors, and ceilings. Fire detection equipment should be utilized within all localized environments, including above any suspended ceiling, below suspended ceiling, and below access floors. It should also deploy a variety of technologies for localized and building-wide fires. This includes fire extinguishers at all egress points, a preaction sprinkler system within the computer room, as well as in all electrical and mechanical supporting spaces, and a wet sprinkler system for the rest of the building.

Peter Sacco, president of PTS Data Center Solutions (www.ptsdcs.com), suggests some best practices for implementing different layers of fire protection. "Minimize the fire load in the computer room by not using or storing flammable material, including data cabling," says Sacco. "Utilize smart-analog photoelectric smoke detectors for preaction system control. In addition, deploy leak detection equipment around all water sources."

#### **Consider A Glass Cage**

If a fire breaks out anywhere near a server room, existing fire-rated windows and doors may block the flames and smoke from entering the space. But as heat conducts easily through most glasses (even fire-rated ones), the temperature in the room could jump several hundred degrees.

One solution is to adopt the latest firerated glass products. These not only block the transfer of smoke and flames, they provide a barrier against the transfer of radiant heat. Some have very high temperature tolerances and may mean the difference between minimal damage and a real disaster. "Glass in data centers needs to be able to protect equipment from exposure to extremely high temperatures—in some cases, 1,800 degrees Fahrenheit," says Devin Bowman, a sales manager at Technical Glass Products (www.fireglass.com). "Products such as Pilkington Pyrostop and Heat Barrier frames are classified as transparent wall systems and limit heat transfer in the same manner as a solid fire-rated wall but offer the same visibility as a non-fire-rated window assembly."

#### **Avoid Water**

Water and other fluids used in sprinklers can have a devastating effect on a data center. Even if the fire is in another room or another floor, the system can turn on and drown servers and telecom gear in seconds. Therefore, dry-type fire suppression agents are preferable. These include FM-200, FE-25, FE-227, Novec 1230, Inergen, and Argonite. However, the various local government agencies responsible for code enforcement have not accepted all of these newer suppression systems. It's a case of finding out what is acceptable in a given area.

"Dry-type suppression systems can be utilized as an equipment protection technique, but most states prohibit them from being the primary fire protection method," says Sacco.

#### **Remember Fire Basics**

It's important not to lose sight of the basics. Portable fire extinguishers are required by codes and authorities.

Fire alarms and smoke alarms, too, can make a big difference. However, such systems can sometimes be installed for the building as a whole and don't provide adequate protection for data centers. It may make sense, therefore, to expand their scope to include computer rooms.

"Fire alarms are often not provided within data centers unless there is a fire suppression system," says Sanford Stuart, senior fire suppression systems specialist at Computer-Site Air Conditioning & Fire Protection (www.computer-site.com). "Newer buildings that comply with code requirements have alarms within all occupied areas but rarely have adequate smoke detection to identify the data center as the source of the alarm."

#### Easiest To Implement: Know Wired Glass Shortcomings

Wired glass has been around for decades. It is seen primarily in fire doors. A mesh of wire is embedded into glass to provide greater strength, prevent break-ins, and withstand heat better than normal glass. While a traditional setup of wired glass and hollow-metal frames will protect computer hardware from smoke and direct exposure to flame, it will not protect it from exposure to extremely high temperatures that can reach 1,800 degrees Fahrenheit in some cases.

But that isn't the only drawback. "Architects and building owners complain about the aesthetic

qualities of wired glass, and it has deficiencies in impact performance," says Devin Bowman with Technical Glass Products (www.fireglass.com). "Wired glass actually has about a quarter of the strength of tempered or laminated glass."

Therefore, the 2006 version of the International Building Code no longer allows the use of wired glass in areas that require what is known as Category 2 impact requirement (such as doors, or window openings that are within close proximity to the ground). You should use tempered or laminated glass, or glass rated for extreme temperatures.

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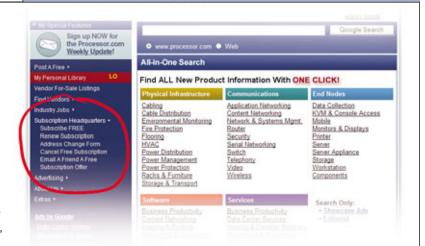
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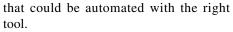
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LANDesk Process Manager 4.0 hopes to be the tool of choice for all your process automation tasks. The latest version adds full integration with LANDesk's Management Suite, bringing the ability to automate virtually any IT administration or management task.

A new Microsoft Active Directory integration functionality makes it possible to automate such tasks as creating and deleting Active Directory accounts, shares, and groups. These new Active Directory capabilities provide the means to automate common user access tasks whenever a new employee starts work, changes positions, or is terminated. The latest version also has direct integration with the Remedy Help Desk solution and makes it simple to link trouble tickets with specific workflows in LANDesk solutions.

Ease-of-use was one of the biggest design goals for this release, with special emphasis placed on the workflow



design tool. The same tool makes it simple to document critical processes for regulatory and compliance purposes. Reuse is possible for small workflows or an entire process with the Process Designer tool. It also supports version control for changes and roll back should you need to revert

to a previous version.

Auditing and reporting log every process step along with the time needed for completion. This makes it possible to identify process bottlenecks and further refine each workflow. Real-time status is available for every running process along with the ability to stop one if necessary.

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STORAGE May 25, 2007

# Virtual Tape Made Simple

# NexiTech VTAng Can Accelerate Your Backup & Restore Operations

In RESPONSE to market demand, NexiTech has created a modular virtual tape array storage appliance: the next-generation Virtual Tape Array, or VTAng (vee-tang).

VTAng is a hardware/software product that transforms an ordinary computer or rackmount server and the hard disk storage attached to it into a D2D (disk-to-disk) backup appliance. The product is aimed at IT directors and managers in the small to medium-sized enterprise market and is designed to help accelerate backup and restore operations. Unlike other similar products on the market, the VTAng can be customized.

Virtual tape emulation technology is used to create a device server that acts just like a bunch of tape drives from the perspective of one or more host computers or backup servers. Since the backup appliance presents a view of one or more "virtual" tape drives to the host, it is appropriately called a virtual tape array. Similar to a VTL (virtual tape library) but faster, the virtual tape array offers many of the same benefits as a VTL but with less complexity and lower cost of ownership.

#### **Three Versions**

VTAng appliances come in three forms: **Head form.** This device bundles hardware and software with a 1U or 2U rackmount server, but with minimal internal storage. This form is ideal for enterprises

that want to try out virtual tape technology and at the same time save some money by using the head to convert legacy equipment into a D2D backup appliance. This helps them to preserve their existing investments in storage resources by extending the useful lifetime of those resources (yesterday's primary storage may be useful as today's secondary storage). Customers like the convenience of buying a more integrated solution that the head form brings, and they want to use it as a controller for some existing external hard disk storage (e.g. RAID or JBOD arrays) that they already have in their possession.



**Disk form.** This version provides a higher level of integration by bundling hard disk storage within the 3U D2D backup appliance. And with the use of ruggedized removable disk storage devices, the subsystem becomes a D2D2RD (disk-to-disk-to-removable disk) backup appliance, letting

users archive backups with a true tape replacement technology: portable hard drives packaged for removability. Storage security is always a concern, but even more so when moving data offsite. To address that concern, there is an optional hardware-based compression/encryption engine that uses the AES-256 encryption algorithm.

**Kit form.** This version of VTAng can vary depending on the existing hardware you wish to use. Give us a call or email us for details.

#### Simple To Use & Manage

VTAng is simple to use and manage. A GUI lets you easily define virtual tape drives and configure the associated bus, target, and LUN values that will be seen by the host. The devices are conveniently arranged in a device tree, and any drives with media loaded are shown in boldface. The user can easily define the file that is used for the backing store and the file size by simply clicking a device. Virtual tape media can be loaded or unloaded with a click of the mouse, and all virtual tape devices can

be started or stopped at once. The GUI also lets users trace all the SCSI commands sent to a particular virtual tape device and will save that information to a trace file. The iSCSI device mappings are also configured graphically, letting the user define which devices are mapped to iSCSI targets.

For those users that need to remotely manage the VTAng backup appliance, Remote Desktop is bundled with Microsoft Windows Unified Data Storage Server 2003 R2, the operating system running on the appliance. Clients are available for most Windows versions, so a Windows client can control the desktop of the appliance and manage it over a network connection as if sitting right next to it.

Support for those particular tape drives that are emulated by VTAng is bundled with Windows, so for many customers, connecting a VTAng backup appliance is quite easy: the host detects the virtual tape drives and then automatically loads the correct driver.

#### **Specifications**

Connectivity: NAS and SAN
Transport: iSCSI, Fibre Channel, and SCSI
Media: Fixed and Removable Disk
Redundancy: RAID (0, 1, 5, 10, 50)
Virtualization: Virtual Tape and Disk
Encryption: AES-256

#### NexiTech VTAng

Starting at \$4,995, depending on configuration

A hardware/software product that transforms an ordinary computer or rackmount server and the hard disk storage attached to it into a D2D (disk-to-disk) backup appliance

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- -Intel Dual core 5050 CPU.
- -1GB 667MGz FBDIMMs installed.
- -Supports 16GB FBDIMM.
- -16X250GB htswp SATA-II Drives installed.
- -16 port SATA-II RAID controller.
- -2X10/100/1000 LAN onboard.
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#### 5U Dempsey/Woodcrest Storage server Stand at-\$6,991



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- -Intel Dual core 5050 CPU.
- -5GB 667MGz FBDIMMs installed.
- -Supports 16GB FBDIMM.
- -24X250GB htswap SATA-II Drives installed.
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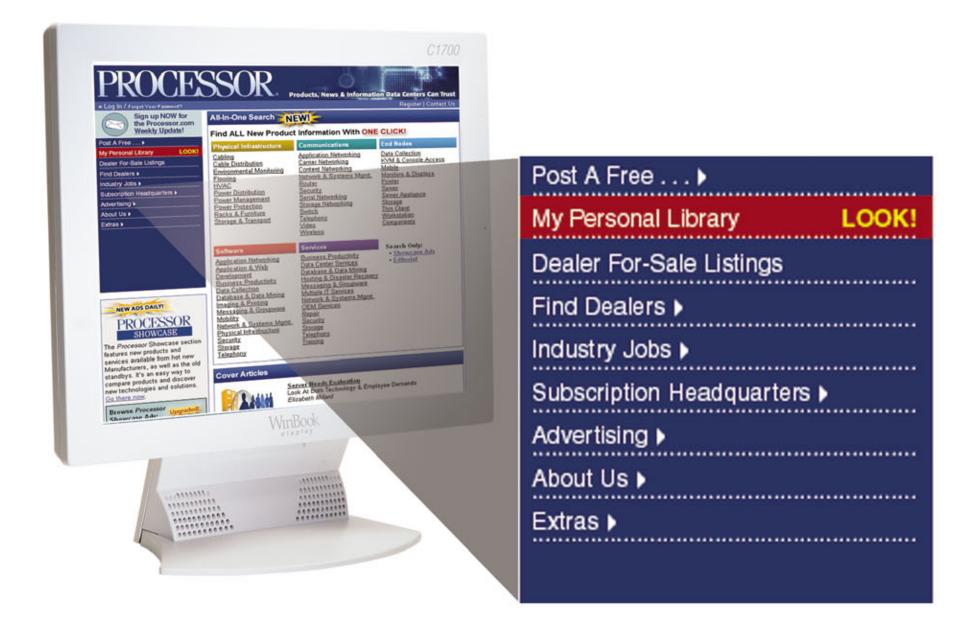
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# The Data Center Of The Future

**New Developments May Mean** More Efficiency & Reliability

by Don Reisinger

**D**ATA CENTER MANAGERS around the world know what their job specifications are today, and they might even know what their duties will be in a year. But what about five, 10, or even 20 years from now? Will the data center of the future look the way it does today? Industry experts say, "Not a chance."

Predicting the future of the data center is not an easy task because data centers are not monolithic. The three main types of data centers (enterprise, Internet data, and engineering supercomputing) offer many unique attributes that are not typically representative of the others. And it is this uniqueness that makes forecasting the future one of the more difficult tasks for any professional.

Richard Greco, principal of the California Data Center Design Group (www .cdcdg.com), says, "Each [type of data center] expresses unique attributes such as higher/lower costs of construction, different reliability levels, different site requirements, and energy efficiency expectations. Consequently, present-day data centers have different looks, and this will be true in the future."

The idea of modularity is pervading all levels of the industry. Modularity could easily usher in an era of cost-effectiveness for companies designing and installing a data center. Current costs of construction are high, and many believe a prebuilt data center could offer many more benefits than current build-to-order centers.

#### The Fight Against Energy Costs

Lest we forget, data centers are governed by businesses that are inexorably tied to cost reduction. Because of this, the most probable development of data centers over the next few years will be connected to cost cutting. And in an attempt to achieve this

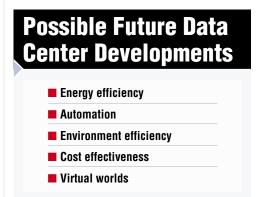
goal, the most likely change will be in the area of energy efficiency.

> Energy costs are at an all-time high in most data centers, but in the future, energy costs could become far less problematic. By building more efficient data centers that offer equal or better functionality at a reduced price, funds can be freed up for new equipment and "futureproofing" the data center.

IBM Vice President of IT Optimization and Virtualization Rich Lechner says, "By 2010, there will be over 35 million servers installed worldwide and over 16 million installed in the United States. This explosion in the installed base is also a contributing factor leading to the server gap in data center power and cooling needs and capabilities. Over the next five years, the expense to power and cool the installed base of servers is projected to increase at four times the growth rate for new server spending."

In an attempt to control this issue, IBM has invested \$1 billion annually to help build services and technologies to address the energy crisis. But it is not alone. The California Data Center Design Group,

which attempts to bring together the best design and engineering practices to create a state-of-the-art data center, is predicting and incorporating into its plans the need for facilities that can cost-effectively respond and adapt to data center changes. There is no doubt this includes energy efficiency.



In five or 10 years, energy efficiency will likely play a leading role in the evolution of data centers. Without instituting better practices across the board, data centers may stagnate without new technologies that could help a business grow more profoundly. Simply put, energy efficiency is the key to data center growth.

#### The Quest For Automation

Today's data centers are rife with manual and monotonous tasks that most IT managers hope could be abated in the future. Luckily for those managers, the possibility of automation and quicker troubleshooting may be right around the corner.

According to IBM's Lechner, his company believes the future of data centers lies in automation. "We believe you are going to see more automated and dynamic capabilities in the data center that allow clients to automatically shift resources from one system to another based on demand, as well as incorporate systems

Go to Page 11

modular data center where the entire center was created elsewhere and will be ready for use upon delivery. According to Greco, this may become a reality: "Manufacturers could develop factory-built, ready-to-use, modular data centers that can be shipped to a site and combined, as needed."

However, it is the common elements that

experts can more readily predict. Imagine a

**DATA CENTER SERVICES** 

# **APRIL 6, 2007**

# **Turn Old Equipment Into Cash**

#### **Horizon Datacom Solutions Helps Businesses Make The Most Of Their Network Hardware Investments**

HORIZON DATACOM SOLUTIONS, located in Columbus, Ohio, has one specific goal: helping businesses make the most of their network hardware investment. Many businesses are faced with growing (sometimes painfully high) capital budgets, and yet they have literally stacks of switches, routers, wireless gear, and other network hardware that they have outgrown, no longer need, or don't have room for. Some businesses find that they have racks filled with decommissioned hardware, or that due to expansion or changing needs, they don't have the right equipment.

In the past, the hardware would simply sit in a spare room or corner until it was eventually hauled away and disposed of in a mass "asset recovery" that took CRT monitors, desktop computers, printers, and other e-waste and hauled it away. But this no longer has to be the case.

Horizon Datacom Solutions specializes in refurbishing network hardware and can help you recover value out of what you have. Plus, selling your equipment to us helps keep it out of a landfill, helping contribute to your corporate "green" initiatives.

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Horizon Datacom helps businesses and organizations get value back from their

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reliable hardware, backed by our guarantee and hard-won reputation for quality and customer service.

At Horizon Datacom Solutions, refurbishing involves much more than blowing the dust off of circuit boards. Horizon Datacom maintains a full testing lab where every piece of equipment is rigorously tested and repaired if necessary. We repaint the chassis, replace missing or broken parts, and carefully repackage the finished product. In fact, many of our customers claim the hardware they purchase from us is virtually indistinguishable from new hardware.

Horizon also offers refurbishing services for companies that want to redeploy their own gear. You simply send it in, have it tested and refurbished, then it's sent back to you, ready to deploy at new locations or for new uses.

#### Real-Time Inventory

Some businesses are leery about buying from the "refurb" market—some with good reasons. eBay can be a crapshoot: You may be dealing with a guy operating out of his garage, or worse, finding yourself buying counterfeit gear.

Horizon Datacom has been in business for more than 10 years. And, in 2003, we were recognized as one of the Inc 500 fastest growing businesses in America.

Businesses worldwide purchase refurbished networking equipment from Horizon Datacom.

Horizon maintains a complete, real-time inventory listing on its Web site at www .horizondatacom.com. While some companies may say, "I can get that for you," when you use Horizon Datacom's online store, you can be assured that what you see online is on the shelf and ready to be shipped to you. In fact, most orders are packed and shipped the same day. And right now we're offering free FedEx ground shipping on most orders of \$100 or more within the continental United States.

#### **Repeat Customers**

Vicky Nosbisch, owner and president of Horizon Datacom Solutions, says, "I'm proud of the fact that most of our customers are repeat customers. Few things give me greater pleasure than buying network gear from a customer, seeing it arrive at our loading dock, then coming back to life in our test labs, ready to find a new home with a new customer."

And Vicky has a challenge: "Send me a list of your unused network gear. We'll show you how much it's worth, make you an offer, and help you find the network hardware you need."

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# Harness A Holistic Data Center View

Continued from Page 1 is typically because of the lack of strict design, documentation, and life cycle management of the data center elements."

This dearth of information means that managers must piece together a holistic view from multiple sources, and, according to Hillier, the following three sources should be tapped: information that can be gleaned through automated means (for example, utilization, configuration information, and software inventory); information that cannot be gathered electronically but can be obtained through inspection (such as cable runs and physical inventory); and information that cannot be obtained through inspection and must be obtained from subject matter experts (for instance, when a system was deployed, who owns it, when maintenance must be done, etc.).

Hillier says that the last area, in particular, can be problematic because it addresses information that gets lost with staff turnover. "Not coincidentally, it is also the kind of information that more and more organizations are attempting to formalize in asset management systems, CMDBs [configuration management databases], and service catalogs," he says.

#### **Perfect Plan**

Today's IT enterprise is more tightly intertwined with business than ever, and for managers seeking a holistic view, that relationship is key. In fact, according to Rob Sims, president and CEO of Crossroads Systems (www.Processor.com/CrossRoads-Co), managers should create a three- to five-year plan that is based off of the enterprise's corporate business plan.

"The IT manager must understand the direction and growth plans of the business to adequately develop their data center strategy," Sims says. "Rarely do businesses allocate enough budget to IT, and therefore it is critical that the IT manager implements a data center that scales efficiently—enabling them to focus their limited budget on the systems and applications required to run the business."

After developing the plan, Sims explains, IT managers need to identify the primary users of their systems (such as finance, engineering, research, or others) and develop a strategy that ensures those users' needs are met with the proper systems and solutions.

#### **Stay In Touch**

Plans such as Sims' and others like it obviously require significant communication to gather all of the relevant pieces. Dimension Data's Cottingham notes that while optimized monitoring systems and dashboards can contribute to a holistic view, "good old-fashioned communication" is the best tool. "IT managers must ensure that their engineering specialists don't get 'stovepiped' or work in isolation. They must keep team leads meeting on a regular basis to share plans and leverage vendors and partners for the latest in thought leadership," he says.

Similarly, Cottingham says, it's important to maintain consistent communication with IT partners and systems integrators because a good partner will share information to help achieve a holistic data center view and boost overall sales success.

Certain data center elements—such as cable runs, power connections, and others that Hillier refers to as "micro" elements—

often are sufficiently documented and/or labeled, and Hillier says that operations and facilities staff can provide such detail upon request. Other elements, however, might require more in-depth communication with personnel or departments.

"The more 'macro' elements of the data center, such as SAN fabric connectivity, clustering strategies, etc., are typically known to either the operations groups or the application owners," he says. "In particular, Ops groups typically understand the infrastructure-related aspects of an environment, and application groups understand any physical or logical aspects that are driven by application requirements, such as application-level data replication."

#### **Finding Value**

Although it's easy enough to get tangled in the business of putting out individual fires, IT managers would be well-served to retain a holistic view in spite of that often tedious work. Nicholas Kottyan, CEO of DataChambers (www.datachambers.com), explains that even as IT managers are tasked with using technology to carry the company forward strategically, they still must tackle fires and routine tasks. "Data center managers should consider their primary job responsibility to be the 'big picture'—the interaction of application, hardware, and networks, of course, but also the overall business objectives. Where does the company want to be in five years? Can the current technology scale up-or down-to get us there?"

Further, while data centers are often viewed as expenses, Kottyan says they're more effective when viewed as a place of innovation, where big ideas can spark revenue, efficiencies, or customer service enhancements. He says, "A holistic view of the data center can mean the difference between a growing, innovating, evolving business model and a stagnant one."

#### **Maintain The View**

Some experts see developing a holistic data center view as the Holy Grail of IT managers, a journey that's rife with challenges and stumbling blocks. But perhaps more challenging for managers is maintaining that view once they obtain it.

"We see a lot of initiatives in this area produce a static document that is out-of-date the moment it is delivered," says CiRBA's (www.Processor.com/CiRBA1) Andrew Hillier. "It is important to establish processes that are sensitive to the rate of change of each area of the data center. For example, information regarding the physical aspects of a data center should be brought up-to-date and then incrementally updated through proper processes."

In addition, Hillier says, details on the business attributes of systems, such as availability targets and maintenance windows, should be maintained in asset management systems or configuration management databases. However, as the rate of change increases, more automated means that taking advantage of programmatic sophistication should be used to track system configurations. Also, utilization information should be tracked with "relatively high granularity," he says.

According to Dimension Data's (www.dimen siondata.com) David Cottingham, it's also crucial for communication to remain active and healthy. "Managers are responsible for ensuring that healthy interdepartmental relationships and communication continue through periods of change. The better they can become at managing change, the stronger their organizations will be. And they must not forget the larger community they belong to as they effect change."

SECURITY; APPLICATION NETWORKING

May 4, 2007

# Manage Bandwidth & Security With User Identity Resolution

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The appliance's new version 2.0 firmware offers additional database support, enhanced identity management capabilities, customizable self service features and an improved GUI and reporting tools.

**Key features in version 2.0:** 

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The IDsentrie appliance offers integrated features designed to enhance network authentication.

the help desk to service customers on account management issues.

Improved GUI and reporting tools. IDsentrie's GUI has been streamlined to speed access to many of its key features and has added a new reporting function to let users quickly access IDsentrie's more than 140 reports.

#### **EX Series**

The EX Series is the industry's only secure WAN management appliance with



The EX Series secure WAN management appliance offers identity-based application visibility.

identity-based application visibility. By managing bandwidth and traffic with unprecedented user and application visibility, the EX Series helps organizations of all sizes secure, optimize, and scale their network edge and perimeter. WAN management functions are consolidated into an appliance with user identity capabilities, so organizations can simplify their management of edge services and increase performance and reliability for applications while simplifying troubleshooting, compliance, and identity forensic activities.

With the EX Series' advanced Feature Chaining capabilities, customers can mix and match EX Series features to customize WAN management solutions to fit their network requirements without sacrificing performance or adding unnecessary latency, unlike implementing point play products from multiple vendors.

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**Instant WAN user visibility.**Correlates between WAN application activity and user identity for top band-

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## A10 Networks EX Series & IDsentrie

The EX is a high-performance appliance that manages bandwidth with unprecedented user visibility; the IDsentrie is the industry's first network identity management appliance with instant user identity resolution.

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# **Keyloggers Know They Are Just Your Type**

Continued from Page 1

administrative rights to a select few individuals," he says, adding that management should have a policy that states what the penalties are for installing unauthorized software. But, Fowler says, there are lots of legitimate uses of keylogging.

When it is a problem, hostile keylogging can occur in either standalone or networked computers. It is a real problem for corporate IT when workers have laptops with hybrid uses—both at home and in the office. Simply clicking a Web link can cause a hostile keylogging problem to be installed on the computer. Coursen calls such programs Trojan spies. They track user activity, save the information to the user's hard disk, and then forward it to the author of the Trojan. The information collected includes keystrokes and screenshots, which can be used in the theft of banking data or support online fraud.

While some IT managers believe that physical access is required to implement keylogging, that is not the case. Although access is required to install a physical or inline device, software-based keyloggers are easy to place on a target machine or network. "For that reason, software is a lot more common than inline keylogging," Coursen notes.

SpectorSoft offers several keylogging programs, including Spector Pro, which records every keystroke, regardless of the program it was typed in. The company promises its software will record every password and every document. However, Fowler notes that keylogging is only one feature of its products. "The keylogging functionality can be turned off," he says.

The business version, Spector CNE, runs on Windows 2000/NT 4/XP/2003. It promises that its nine logging tools will let employers record, archive, and review from one location, allowing them to know what every employee is doing at all times.

Another keylogging software vendor is Awareness Technologies (www.awareness tech.com). Its WebWatcher lets employers track Internet use and view the recorded data from any computer in the world. The software records anything accessed by the monitored computer and sends the material to a password-protected Web site controlled by the person doing the monitoring. Data is protected using 128-bit encryption.

#### **Protect Yourself**

Coursen says the best way to protect an individual computer or a network is with the standard antivirus programs installed on most networks. "They are the best and most effective way to be sure you are protected," he says.

The other effective way to avoid keylogging attacks is by being smart: Do not open attachments or email messages from unknown people, do not follow links that you are unsure of, and do not run programs on Web sites.

"Believe it or not, you can stay away from the lion's share of problems just by being careful about what you do online," Coursen says. In addition, he advises keeping the computer's operating system up-to-date. Unlike many other forms of malware, keyloggers are OS agnostic. They work with any OS.

"At the corporate level, you'll likely have more resources for security," Coursen notes. Dual-factor authentication—a hardware device and one-time passwords—will lock out all but the most determined hackers. While it is possible to use a 30-second password, it is unlikely that a hacker would act that fast.

Use of the virtual keyboard can be one way to protect super-secure data. Using it to log in to important Web sites might offer an added level of protection.

Fowler notes that "keylogging" and "monitoring" are not synonymous. "Keylogging

can be a part of the monitoring process," he says. "What managers need to know is that monitoring the use of employee computers has many benefits. It can show management how their computers are being used, for good and for bad, and it can help management significantly reduce the problems associated with Internet abuse."

"For example," he says, "if an employee has grown to spend one or two hours a day on non-work-related Web sites and then management informs them that their computer activity will now be monitored, that employee, if he wants to keep his job, is going to significantly reduce the time spent goofing off. And another employee who might be trying to supply information to the competition is very likely to be deterred if he knows his activities are being monitored."

#### Keylogging: Legal, But Is It Ethical?

The legal bottom line for employers who track a worker's use of company equipment is that because the company owns the equipment, the company has the right to monitor or limit use of that equipment. A computer is company property, so it is legal for the company to snoop on its own property.

"We certainly believe that monitoring is ethical," Fowler says. "We also believe that

employees should be informed that what they do on company computers is subject to monitoring."

Coursen agrees with full disclosure: "I try to stay away from the ethics of the matter. But at a minimum, companies should have a policy in place and should make it publicly known."

Otherwise, anything that a company might discover about an employee might not stand up from a legal point of view.

"Really, I don't see much legitimate use of keyloggers," Coursen says. He says internal use of a keylogger on a corporate computer system will open the network to hostile, external keylogging. Once keylogging APIs are installed on a network and a port is opened for keylogging, it is hard to differentiate "good" keylogging from "bad."

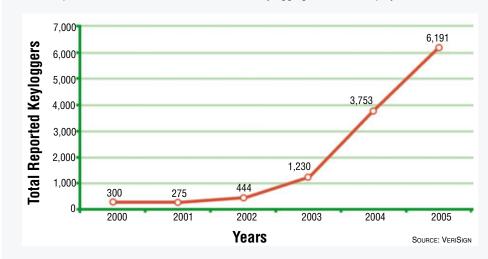
"You are literally opening an avenue of attack for keylogging," Coursen says. "You are providing a port for malware."

Fowler says the boundaries allow only select individuals to install software and that monitoring should be done only when authorized by management.

"Employees who know their computers may be monitored typically don't waste nearly as much time on the Internet as others," he adds.

#### **Growth In The Number Of Keyloggers**

Hostile keylogging software typically is delivered through Trojans or spyware code that is put onto a user's computer. However, there are firms that use keylogging to monitor employee activities.



# **The Data Center Of The Future**

Continued from Page 9 that can provision, troubleshoot, and cor-

rect themselves," he says.

So what does this mean for the average IT manager? Not only will these solutions make their jobs more efficient, it could also mean significant cost cutting for businesses. As mentioned earlier, cost effectiveness is paramount to an enterprise. If a company has the ability to automate processes without the need for human interaction, the future may lead to a reduction in IT staff. With that said, it is expected that IT labor

costs will continue to rise over the next year, employment growth should continue, and there will still be a need for human interaction on more complex issues. More often than not, the human touch is needed to solve any real problem.

#### **The Less Likely Future**

Besides cost effectiveness, a variety of ideas is swirling around the industry that involves data center evolution that may be unrealistic but still possible and cool to envision.

Right now there are likely thousands of people roaming virtual worlds such as those found in Second Life or World Of Warcraft. Now imagine that kind of environment as a way to manage and visualize data centers.

Lechner believes such a world is a possibility. He says, "Clients will go into virtual worlds from a remote location and view a mirrored image of their data center and deploy, reconfigure, repurpose servers and software through this virtual world. This will be a unique way to manage and view your entire data center from any location."

Interesting? Sure. Probable? No. As of this writing, the chances of a virtual world replacing current practices are minimal at best. Data center managers around the world are concerned with cost cutting and not what their avatars will look like when they hop onto the server.

The future, though perhaps daunting, is still bright for data centers. The days of glacial evolution are all but gone, and the industry is braced for significant advances over the coming years. Whether it's energy efficiency or a virtual world, data center developments could significantly impact the way IT managers perform their jobs.

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# Taking A Data Center Snapshot

#### Software & Tools Can Help SMEs Get A Clearer Picture

 $by\ Elizabeth\ Millard$ 

CREATING A HOLISTIC strategy for power, cabling, and cooling is paramount for any data center, but putting the time into developing a cohesive monitoring plan can be challenging. Fortunately, plenty of tools are at the ready to help tackle the issue.

As more small to medium-sized enterprises demand software and tools that can interoperate with existing applications in data centers and give them a comprehensive view of vital operations functions such as cooling, vendors have stepped up with software that can do everything from use computational fluid dynamics to track airflow to address cable management problems.

#### **Power Player**

A major area for tool deployment is power. Power management products that can help include the type of products found at Chatsworth Products, which has a variety of configurations of power strips, or PowerVision from Eaton, which offers uninterruptible power systems and also the software to monitor them and other data center elements. PowerVision Network Edition, for instance, has remote monitoring and operating system shutdown for single-phase UPSes and other equipment.

BayTech is another market player, with its Global Power Management software for remote power control devices. The application supports equipment with single or redundant power supplies, provides a graphical representation of power environments, a specified time interval. This can be very helpful for seeing trends such as energy spikes in certain months, which can be useful for long-range planning.

#### **Cool Running**

A much-discussed issue for data centers is cooling, which goes hand-in-hand with power because the cooling system affects



power costs and utilization. In general, IT managers should be thinking about software and tools that can give them a clear indication of current cooling but also provide monitoring capability, says Lisa Raffin, vice president

# A much-discussed issue for data centers is cooling, which goes hand-in-hand with power because the cooling system affects power costs and utilization.

and emails alerts about temperature changes and threshold issues. In terms of getting a snapshot of a data center's power usage, the software is able to graph power, voltage, current, max current, and temperature over of professional services at software firm VFA (www.vfa.com).

Without adequate cooling, servers simply shut down, she notes. Yet because blades are packed tightly into a rack and

each blade generates a large amount of heat, cooling the racks effectively can be a challenge. Some data centers have been replacing traditional air cooling with alternatives such as chilled-water liquid refrigerants. No matter what a center is using, though, having a clear indication of the situation is vital.

A number of firms provide environmental monitoring. One is AVTECH Software, which has products such as Room Alert, which assists with monitoring temperature, humidity, power, and changes in environment. Several sensors can be used in one center to log hot spots and cooling areas.

Another tool that's been beneficial at many data centers is the WeatherGoose from IT Watchdogs, which also has Super-Goose and PowerGoose. These sensors contain an internal Web server that operates without PC or client software and needs only a Web browser to monitor environment conditions.

#### **Cable Channel**

Another area where software and tools can help to give IT managers a snapshot of the data center, and also help with management tasks, is in cable management.

Although there are a number of physical cable management products—those that bundle wires together with color-coded clips, for example, or encase cables in a larger tube—cables can also be configured using software.

In its "Sixth Commandment of System Administration," cable management firm UltiCAM (www .Processor.com/UltiCAMCo) states, "Thou shalt know what cable goes where." Although the faux-biblical language may be tongue-in-cheek, the message is a solid one. Tracing cables back to their sources can take time and cause frustration they're not configured properly in

if they're not configured properly in the first place. Also, creating documentation will help reduce network downtime, assist with moves and changes, and develop better connections between voice and data networks.

UltiCAM is a graphic-oriented system written in Microsoft Access that's geared toward network designers and consultants. It controls the management of the physical layer, device configuration, and circuit connectivity in a number of systems such as networks, facility management, and cable testing. The application documents the physical characteristics for any network and then presents the configurations of equipment and cabling in either a database view, schematic, or drawing.

Another option is Cable Manager from TelSoft Solutions (www.Processor.com /TelSoftSol), which documents circuits and physical connectivity for all cable

connections that run between voice and data equipment. The application allows managers to identify space capacity while planning moves or changes, store information for multiple buildings, and define connectivity and circuit routes.

June 15, 2007

Also available is NetDoc Cable Management Software from Brady (www .Processor.com/BradyID). The application allows for documentation of horizontal and backbone cables, hardware, assets, pathways, locations, and users. In its product sheet, the company points out that 75% of service calls are cabling-related, with technicians spending most of their time searching for the problem and only a small amount of time actually fixing it.

With cabling, as well as with power and cooling, having adequate knowledge of a data center's operations and putting monitoring controls in place can go a long way toward preventing issues and giving you a more holistic view of your data center.

# **Tools For A Holistic Data Center View**

#### AVTECH Room Alert

Monitors temperature, humidity, UPS power, and other environmental factors and includes network-wide server, device, and event monitoring

www.Processor.com/AVTECHSoftware

#### BayTech Global Power Management

Software that supports equipment with single or redundant power supplies and gives a graphical representation of power environments

www.Processor.com/BayTech

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www.Processor.com/CPI

#### Eaton PowerVision Network Edition

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# **Network Monitoring Applications**

#### **Keep Tabs On Your** Network's Health

by Sixto Ortiz Jr.

"THE NETWORK IS The Computer" is Sun Microsystems' (www.Processor.com/Sun) famous trademark phrase, a succinct but powerful sentence that clearly defines what it's all about in today's computing environ-

Maintaining a clear picture of the status and health of the devices connected to the network is one of the main priorities for data center and IT managers who want to get a more holistic view of their data centers and networks. Network monitoring applications nicely fill this gap by providing just that—an overall view of the ecosystem of devices connected to the network and their status.

#### **Tools: What To Look For**

Everyone agrees that network monitor ing applications can fill a vital role for busy

ScienceLogic's (www.Processor.com/ScienceLogic) EM7 browser shows performance and availability of Windows 2000 servers.

network and data center administrators. But what should administrators look for in a network monitoring application?

David Link, CEO for ScienceLogic (www.Processor.com/ScienceLogic), a Virginia-based company that develops and markets the EM7 IT Management System appliance-based network monitoring product, says customers should look for an application that delivers both a high level of integration and provides rapid deployment.

According to Link, companies typically deploy tools along IT silos related to subject matter expertise. "Unfortunately," says Link, "rarely are these tools integrated together to give a single pane of glass dashboard view." According to Link, this type of integration can deliver a tool that enables what he calls "the granular management of IT assets as they relate to the business impact of IT."

Neverfail (www.Processor.com/Neverfail Group) is an Austin, Texas,-based highavailability and disaster recovery solution provider that also offers network monitoring. Specifically, the company's Neverfail SCOPE (Server Check, Optimization, and Performance Evaluation) and Heartbeat applications combine to provide a high availability and disaster recovery product that automatically monitors your server environment and delivers information about various parameters, including bandwidth usage, performance, workload, and others, while also providing automated, seamless failover capabilities.

John Posavatz, vice president of product management for Neverfail, says customers should look for network monitoring applications that keep tabs on all network aspects, including applications such as antivirus, antispam, backup/archiving, operating systems, physical servers, and the overall network infrastructure. And, he adds, the monitoring application should be able to do both manual and automatic failover

#### **Pitfalls To Avoid**

When looking for network monitoring products, there are certain pitfalls prospec-

> tive buyers should avoid. For starters, says ScienceLogic's Link, avoid tools sporting complicated user interfaces that don't grant access privileges based on user job function. Also, avoid tools that don't play nice with other network components or monitoring infrastructure.

> "Flexibility is a key component to successful longterm operations management objectives, as networks are living organisms that change each and every day, and the tools that assist you in delivering great service quality need to be extremely flexible to adapt to an ever-changing environment," says Link.

#### One Box, Lots Of Management Features

Numerous products in the marketplace are designed specifically to provide the

holistic environments and infrastructure views that administrators desire. For example, ScienceLogic's EM7 IT Management System is an appliance-based product that provides seven basic enterprise management functions: mapping all devices and applications on the network, measuring and monitoring key performance indicators, automating the alert and notification process, correlating incidents to problems, integrating existing solutions, controlling system access, and planning for maintenance and future

"EM7 is unique," says Link, "because it is delivered as a meta appliance." Link says the product delivers the benefits associated with an appliance-based application while providing the management of multiple IT infrastructure components, including

Server Monitoring & Disaster Recovery Combined

Reliability and consistent, always-on performance are absolute requirements for the apps business depends on today. Neverfail's Heartbeat and SCOPE provide organizations with two important capabilities: monitoring of server health and automated failover in case of failure. SCOPE is a Windows service that collects performance data from your Windows servers every 15 minutes and configuration data every 24 hours.

> The company requires that users of its Heartbeat availability and disaster recovery product install SCOPE and initially collect server data before installing the Heartbeat applications. Once installed, the SCOPE application runs in the background as a Windows service, collecting information that is periodically and automatically sent to Neverfail's extranet for analysis.

Neverfail's Heartbeat application uses an active and passive server to ensure always-on availabili-

ty. Data is continuously replicated from the active to the passive server; in case of active server failure, the switchover is instantaneous, and the passive server assumes the role of the active server until repairs can be effected.

"Neverfail's solutions are unique," says Neverfail's Posavatz, "in that failover takes seconds, rather than minutes." Users can continue to work with applications while network administrators fix or upgrade systems without taking them offline, he says.

And, he adds, Neverfail's modules are available for various platforms, including

Nimsoft's (www.nim soft.com) NimBUS **Enterprise Console is** showing a Cisco SLA dashboard.

network infrastructure and applications. Other services include asset life cycle and configuration management, automated event alerts, extensive reports, and a centralized data repository.

In essence, the product delivers the functionality of what would otherwise require multiple products in an appliancebased package. Specific benefits from the appliance-based product, says Link, include rapid deployment and ROI, lower TCO, and pre-engineered, hardened security.

Server, IIS, File Server, and Lotus Domino.

Exchange, BlackBerry, SharePoint, SQL

#### **Network Monitoring Options Galore**

Another network monitoring application available today is Nimsoft's (www.nimsoft .com) NimBUS for Network Monitoring, an application designed to provide network visibility for administrators via the monitoring of environmental variables such as access and response time to devices, interface traffic, polling and trap reception of SNMP devices, and syslog monitoring.

These capabilities are delivered, according to the company, via the use of probes and gateways that monitor variables and collect information about the status of the network. Information is delivered to system users via a Web-based alarm console that displays customized dashboards showing real-time status of monitored parameters, such as bandwidth utilization, latency, and response times.

#### **Keep Your Eye On The Network**

No one in their right mind would use a computer without applications that indicate the status of critical system variables. Network monitoring tools extend this concept to the network, providing administrators with the views they need to keep networks running smoothly and business applications available 24/7.



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- Available in single, dual, or quad video models
- Supports video resolutions up to 1600 x 1200
- Video tuning and skew adjustments available ■ Dual version allows another KVM near computer



#### CrysrtalView™ Pro

#### Extends keyboard, video, mouse, audio and serial up to 33,000 ft

- Supports DVI video resolutions up to 1920 x 1200
- Supports Fiber or CATx cable
- Supports singlemode or multimode fiber cable
- Supports PS/2 or USB keyboard and mouse
- Fully automatic KVM sharing
- Supports for local KVM station



**KVM Accessories** 

#### Extends keyboard, video, & mouse up to 1000' over CATx

- Automatic compensation and equalization
- Automated video skew adjustments
- Models available for PS/2, USB or both ■ Video resolution up to 1600 x 1200
- Compatible with KVM switches
- Operating system independent

#### Organize, Streamline Server Rooms



#### RackView™

#### 15", 17", 19", 20" LCD flat panels Fold forward & backward designs

- Built-in single or multiple user KVM switch options
- Supports AT/XT, PS/2 and Unix computers
- DVI and S-video options available on 19" and larger LCD
- LCD flat panel and keyboard can be sold separately
- Available with full size, full function Sun keyboard ■ Optional multi-media version with TV tuner & stereo speakers



#### RackView™ Panel Mount LCD Mounts vertically in a standard 19" rack

- Available with a 15",17", 19", 20", or 23" LCD
- 19" and 20" models support DVI and VGA inputs ■ Resolution up to 1280 x 1024
- Fits in 7 9 rack units (Depending on model)
- Quick and easy rack mounting installation



#### VideoSplitter™ CAT5

#### Distribute, amplify & extend video to 6 or 12 monitors

- Video resolutions up to 1600 x 1200
- Each remote monitor can be up to 1,000'
- Optional Audio and Serial
- Easy to install
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■ DVI and S-video options available on 19" or larger LCD

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iStor found inspiration when it created the highest performance, up to 1160 MB/s, and most robust iSCSI products. The resulting solutions provide companies with the ability to overcome technology and total cost of ownership limitations in DAS, SAN, and NAS environments.



#### The System

Fully-integrated GigaStorATX 1GbE and 10GbE controllers conform to the ATX form factor specifications, providing a cost-effective performance-based iSCSI Storage System.

#### The Solution



For VAR's and System Integrators that require a vendor-provided enclosure, iStor offers the iS326 Solution. The iS326 includes the GigaStorATX System supporting eight ports of GbE or a single 10GbE for iSCSI connection, with capacity for up to 15 customer-supplied high-capacity sATA drives.

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# **Product** Releases

#### **PHYSICAL**

#### **Cable Testing**

■ Fluke Networks released the Micro-Scanner2 Cable Verifier, a cable-testing device capable of reporting cable length, wire map, cable ID, and distance to break or short. The MicroScanner2 shows graphical representations of test results on the device's built-in display and can also determine the services available at the tested port, such as 10/100/1,000 Ethernet, POTS, or PoE. Features include the ability to verify and identify RJ-11, RJ-45, and coax cables without adapters, a built-in analog/digital tone generator, and a tough rubberized shell. Fluke Networks offers the MicroScanner2 as a standalone unit or as part of a professional test kit, which includes the Micro-Scanner2, an IntelliTone Pro 200 Probe, six cable ID termination devices with RJ-45 and coax connectors, a breakout cable with eight clips for testing unterminated cable, RJ-11, RJ-45 and coax patch cords, and a carrying case.

■ OMNI FIT, a new component of **Radio Frequency System's** CELLFLEX wireless network access system, provides a "contact claw and backnut" capable of being compatible with both copper and aluminum transmission lines. The OMNI FIT comes in 7/8- and 1-5/8-inch sizes to allow electrical connection to a variety of sources that RFS' wireless network transmission can connect to.

#### Power Protection

■ Para Systems released 10 Minuteman Enspire power products, which fall into rotating outlet, child safety, ruggedized, and other categories. The Rotating Outlets category includes the MMS760RCT six-rotating outlet surge suppressor with coax and phone line protection and the MMS780R, which has six rotating and two fixed outlets. The category also includes the MMS7100RT, which has five rotating and five fixed outlets, as well as phone line protection. The MMS7120RCT has 12 outlets, eight of which rotate, and includes coax and phone line protection. The child safety surge suppressors, MMS370 and MMS370T, each have seven outlets with sliding child safety covers. The MMS370T also offers phone line protection. Other surge suppressors include the Ruggedized seven-outlet MMS570, the MMS110 single-outlet wall tap surge suppressor, the MMS130C threeoutlet wall tap surge suppressor (with coax protection), and the six-outlet surge suppressor twin pack (MMS362P).

#### Racks & Furniture

■ Winsted Technical Interiors announced the Matrix Evolution, a console designed for broadcast environments. The console operates as a single, self-contained monitoring station with several large-format, flat-panel monitors. The Matrix Evolution features the Matrix Slat Track System console, which utilizes a horizontal track system into the work surface of the desk. Two to three monitors can be placed on a Scorpion pole mounted on a horizontal track system. The Matrix Evolution also includes a desktop turret with built-in rackmounts for electronics and an integrated Adapt-A-Track system, designed to mount an articulating monitor arm. The turret and workspace feature a Corian surface, and the cabinet utilizes stainless steel end panels with LED backlit cutouts.

#### COMMUNICATIONS

#### Network & Systems Management

■ **Brocade** announced new products and service enhancements that enable greater efficiencies in enterprise data centers and branch

PRC0307

offices. The new capabilities address customer challenges in the areas of performance, data protection, and virtualization. The Brocade 48000 Director now features 10Gbps Fibre Channel connectivity, and the Brocade FC10-6 Director blade provides the capability to interconnect systems between remote sites for high-performance business continuity and disaster recovery applications. The Brocade Enterprise Fabric Connectivity Manager now includes an Advanced Call Home feature and the Brocade Fabric Manager has performance monitoring functionality. The Brocade 48000 router blade and Brocade 7500 routing platform both added Fast Write acceleration capabilities. The Brocade Access Gateway is now available on the entry-level Brocade 200E Switch, which helps reduce the number of devices to manage in the SAN.

■ Lenovo announced PC-Doctor for LAN-Desk, system-health software that lets service managers test and manage PC hardware remotely over a network. PC-Doctor can be remotely launched on specific computers in order to check hardware or run diagnostic tests on Windows XP/Vista.

#### Security

■ ST and Gemalto teamed up to make a microcontroller chip for smart card applications. The EMVCo-certified ST7GEM secure MCU will be preprogrammed with Gemalto's interface software for turnkey integration into embedded smart card readers. The ST7GEM is available in 24-pin SO and QFN packages. Pricing is \$4.50 in 1,000-unit quantities.

#### Switch

■ Blade has announced what it says is the first IPv6-ready, 10 Gigabit Ethernet switch for the HP BladeSystem c-Class. The HP 1:10Gb Ethernet BL-c switch (\$4,999), available from HP, offers 10Gbps connectivity to routers, iSCSI SANs, and/or IP NAS, while still providing 1Gbps ports for economy's sake. It's intended for IPTV, disaster recovery, video surveillance, high-performance computing, and other uses.

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■ Fujitsu Network Communications announced the Packet ONP (Optical Networking Platform), which provides modular integration of Ethernet, ROADM, and SONET transport technologies, built on a single addressable optical networking class element. The FLASHWAVE 9500 universal switch fabric technology provides complete system modularity that allows service providers to leverage ROADM technology to economically deliver bulk bandwidth, connection-oriented Ethernet transport technology, and SONET technology. The FLASHWAVE 9500 system will support pseudo-wire and MPLS technologies to deliver connection-oriented Ethernet and provide private-line equivalent QoS in a unified Ethernet services network. The platform supports 480G of SONET or packet bandwidth in one-third of a rack. The platform also integrates ROADM functionality with a two-degree, 40G-ready ROADM in a quarter of a shelf.

#### Telephony

- STMicroelectronics has released a high-quality 3D sound chip for mobile phones. The TS4997 is a stereo power amplifier that can provide up to 1.2 watts per channel into 8-ohm loads. It runs on 2.7 to 5.5V power, has an amazing 106dBA SNR, reduces pops and clicks, and resists supply interference with 85dB PSRR. It also comes in a QFN16 4 x 4mm package with 0.65mm pad pitch.
- TalkSwitch's 240vs (\$695) is an entrylevel hybrid (analog and IP) phone system

intended for small businesses. It supports two CO lines and four local extensions, and each can be either analog or IP. The 240vs is also networkable and upgradable, so your phone system can grow with your business.

#### Video

■ Conexant announced the CX24230 DVB-T (digital video broadcasting-terrestrial) demodulator and CX24210 worldwide terrestrial and cable tuner. The devices can integrate into DVB-T set-top boxes, PC video capture cards, and integrated digital televisions. The CX24230 demodulator is a high-performance DVB-T demodulator with an internal microcontroller and memory. Firmware for the microcontroller is provided by Conexant, and it includes a 12-bit analogto-digital converter, digital adjacent channel filtering, and enhanced forward error correction architecture. The CX24210 tuner supports multiple worldwide digital and analog terrestrial standards, including DVB-T, ATSC, PAL, NTSC, and SECAM, and also complies with global cable specifications including DOCSIS 2.0, EuroDOCSIS, and DVB-cable. A front-end reference design that includes the CX24230, the CX24210, and all required software is available.

#### Wireless

■ PCTEL has announced the MAXRAD WiMAX CPE antenna, which has a flexible mounting bracket, is available for azimuth tilt. The antenna's housing is constructed with a backplate that attaches directly to an external CPE radio enclosure. With the mounting bracket, the MAXRAD WiMAX CPU antenna (also available as a kit) can be mounted on a mast or on a wall.

#### **END NODES**

#### **Data Collection**

■ IOGEAR announced its Smartlink Transfer Cable for Windows Vista to help users transfer data to new PCs. Designed to work with Windows Easy Transfer, the cable sends files, music, pictures, and settings from Windows XP computers to another PC running Windows Vista through a USB connection. The Smartlink Cable supports transfer rates up to 480Mbps. IOGEAR's Smartlink Transfer Cable for Windows Vista is compatible with USB 2.0 and USB 1.1 and supports two-way data transfer for Windows XP and Vista computers. It does not require the installation of additional drivers or software.

#### KVM

■ Aten has announced it will introduce trendsetting KVM switch technology at the Computex trade show. The company will demonstrate new CAT 5 KVM switches, LCD KVM switches (the first CAT 5 Dual Rail 19-inch LCD KVM switch in the world, according to Aten), IP-based server management products, and KVM extenders and HDMI switches at the trade show in live demos. The demos will include showing the products' functionalities for server room expansion; Over the NET solutions via LAN, WAN, or the Internet for remote server management (8- or 16-port CAT 5 KVM switches); and HDMI video solutions for hometheater applications. Aten will also show a new entry-level two-console, 16-port Matrix KVM switch that includes two USB virtual media ports on each console and supports up to 96 user accounts. The company will also display its 4-port HDMI VS481 switch, which is HDMI 1.2-certified, supports HDCP, and includes four HDMI input ports.

#### Mobile

■ AMD has announced that Toshiba plans to release three Satellite notebooks that will use AMD's Turion 64 X2 dual-core mobile technology, as well as AMD's M690 series

chipset. The new Satellite notebooks are expected for release in late summer. Toshiba is a participant in AMD's Better By Design program, which lets global OEMs design laptops that give users performance, graphic, and wireless connectivity features, as well as energy efficiency and extended battery life features.

AMD also expanded its Embedded Solutions line to include AMD's Sempron 2100+ and Geode LX 800 @ 0.9W processor, which the company says can now support designs users deploy in harsh temperature environments. The 2100+ includes a fanless system design that uses AMD64 technology in a 0.9W power envelope. AMD says the processor provides advantages to designers that focus on providing high performance and functionality. Additionally, the CPU is compatible with the M690T chipset, featuring high-shock and vibration specification Socket S1 for ruggedized computing. The Geode LX 800 offers temperature support in a 40 to 85 degrees Celsius range.

■ Lenovo announced the ThinkPad X61, X61s, and X61 Tablet PCs, which boast more than a 30% improvement in broadband wireless connectivity, lengthened battery endurance, and reinforced security through I/O port disablement with the newest mobile processing technology. Additionally, Lenovo released the Lenovo 3000 V200 and N200 notebooks, which have a built-in optical drive. Prices start at \$1,484, \$1,474, and \$1,779 for the X61, X61s, and X61 Tablet, respectively, while the Lenovo 3000 V200 and N200 begin at \$1,199 and \$949, respectively.

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#### Monitors & Displays

- General Dynamics Itronix introduced DynaVue touchscreen display technology. With a design that focuses on contrast ratio and polarization techniques, DynaVue technology optimizes viewability in all lighting conditions and will be featured as the standard touchscreen on General Dynamics Itronix's line of rugged and semirugged notebooks and tablet PCs. Instead of adding light to improve visibility, the DynaVue touchscreen display technology focuses on a light-filtering technology that achieves an improved contrast ratio to provide rich color, sharp images, and details. DynaVue also optimizes the notebook's battery life and processor performance. DynaVue provides a balance between display brightness and contrast ratio and uses a single CCFL (cold cathode fluorescent lamp) to provide brightness control without sacrificing battery performance. The technology also eliminates susceptibility to heat damage from extra CCFLs and meets the MIL-HDBK-87213 Rev A military standard for electronically generated airborne displays for direct-sunlight viewability.
- 3M introduced the Vikuiti KE Polarizer for the 3LCD projection display market. The KE Polarizer enables high-brightness, high-contrast, and excellent 3LCD projection image quality from both front- and rear-projection systems. The key technology in the KE Polarizer results in a more durable, higher-stability polarizing component compared with traditional dye-stuff or iodine-based polarizers. KE Polarizer components can sustain a high level of light engine performance with no image darkening or contrast loss over thousands of hours of continuous operation.

#### Server

■ MOXA has released the new compact 8-port NPort 5600-8-DT desktop serial device series of servers. The series include 8-port, three-in-one serial device servers that support the RS-232/422/485 interfaces.

\*\*Go to Page 18\*\*

HVAC

APRIL 13, 2007

# **Cooling For Cramped Spaces**

MovinCool CM12 Ceiling-Mounted Unit Designed To Save Space & Money

SPOT COOLING IS an energy-efficient alternative to central air conditioning. But often the main roadblock to efficient cooling of cramped server telecom and equipment rooms is the lack of floor space to accommodate a roll-in portable spot cooler. The MovinCool CM12 offers a convenient

solution: It's a lightweight, space-saving, easy-to-install ceilingmounted unit.

The CM12 delivers 10,500Btu/H of cooling in a self-contained unit that mounts easily with off-the-shelf hardware. It connects to a standard 115V, 15-amp circuit.

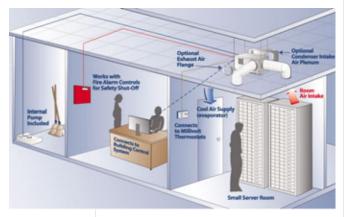
The CM12 features the shortest top-to-bottom profile in the industry—

only 15.5 inches—ensuring it will fit into nearly any drop ceiling. In addition, the CM12 comes with several cost-saving capabilities and safety features:

- Conveniently controlled by most offthe-shelf Millivolt thermostats
- Works with fire alarm controls for safety shut-off
- Self-contained system requiring no refrigerant piping
- Built-in supply and return air flanges enable easy duct installation and improved air circulation
- Warning signals and alarms for condensation overflow and unscheduled shutdown can be wired to a central location
- A standard internal pump

 Mounting brackets designed for off-theshelf mounting hardware

In addition to the CM12, MovinCool offers the Office Pro lineup of portable spot cooling solutions for low-temperature equipment cooling; the Classic and Classic



Plus Portable Series for harsh environments; and the PC7 Portable Air Conditioner for individual hot spots.





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Continued from Page 17

MOXA says the series is DIN Rail- and wall-mountable, and users can attach a DIN Rail kit to the device's bottom panel in order to save space. Additionally, users can place the series in a smaller cabinet. The NPort-5600-8-DT series devices have two Ethernet ports, which users can use as Ethernet switch ports. One port connects to the network or server, while the other can connect with other Ethernet devices. The series supports Terminal Block and Power Jack inputs, and built-in speakers can alert users to problems with Ethernet links or power inputs. There's also an email warning available when exceptions are detected.

MOXA also announced the ioMirror E3210, a P2P active Ethernet I/O server. By using Ethernet and IP networks, the ioMirror can increase the distance between digital inputs and digital outputs. It also supports applications such as multiple intrusion detection, fluid level sensors, and alarm signals, even across multiple locations. With ioMirror, the transmission speed between DI and DO can be up to 20ms faster than over an Ethernet connection. The ioMirror E3210 can also be used to transmit signals from optical sensors in conveyor belt systems, and according to MOXA, a company can have signal mapping set up in less than five minutes.

#### **Server Appliance**

■ NCS Technologies has announced that it plans to ship server appliances based on Intel's new enterprise platform with Dual-Core Intel Xeon processors. The appliances include the Intel 5000P and 5000V chipsets, as well as dual-core Intel Xeon processors. They support DDR2-667 FBD memory and include a PCI Express bus

Premise Wiring

and Intel I/O Acceleration, Virtualization, and Core Microarchitecture. The new server appliances are compatible with Intel Xeon 5100 and Intel Xeon 5000 series dual-core CPUs with 1,333MHz or 1,066MHz system buses. The NCS Technologies server appliances will be available in rack-mountable 1U, 2U, 3U, and 4U form factors.

#### Storage

- LaCie unveiled the newest version of its Ethernet Big Disk storage device, designed for home- and small office-use. The new device offers a massive 2TB of storage capacity in a single device, making it ideal for photo, music, and video streaming over the network. Interface types include Ethernet and High-Speed USB. Users can also increase the unit's storage density via an additional USB port. The Ethernet Big Disk supports UPnP-compatible AV adapters for media-serving applications and supports media players from Apple and other vendors. The device is available for a suggested retail price of \$1,099, and the 1TB Ethernet Big Disk is still available.
- MicroNet Technology has announced the Platinum RAID Pro. This multiterabyte eSATA RAID product can provide greater storage capacity than SATA disk arrays. The Platinum RAID Pro was designed for portability and stores up to 5TB of data. It has a 64-bit Intel XScale processor and 128MB of ECC cache. The system is preconfigured for RAID 5, but it also supports RAID 0, 1, 3, and 0+1, as well as JBOD. It is compatible with modern OSes, such as Windows Server 2003 or above, Windows Vista, recent Linux releases, and Mac OS X, and is available starting at \$2,349 for a

2.5TB array, \$2,999 for a 3.75TB array, and \$4,499 for the 5TB array.

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■ Overland Storage has announced the REO 9100 D2D VTL, which includes performance improvements, increased capacity, and more configuration options. The REO 9100 follows the previous REO 9000 backup and recovery product and offers improved data backup and recovery, as well as VTL, standalone virtual tape drive, and LUN configuration options. Overland Storage has also included dual 3Ware SATA RAID controllers, multiple 4Gbps Fibre Channel or iSCSI host connectivity, up to 66TB of raw data capacity, user-definable VTL with up to 32 virtual tape drives, and up to 180 virtual cartridges and four library partitions. It also includes RAID 5, conformance with EU RoHS requirements, and proactive monitoring.

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- RAID has introduced a 4G-FC (4Gb Fibre Channel) RAID subsystem, the X4. The X4 provides twice as much bandwidth as earlier versions and is ideal for applications such as primary enterprise data storage, database applications, online storage, and video streaming. This 4G-FC RAID subsystem includes 12 configurable 4G-FC host ports, a high-availability dual controller, and failover capabilities and also features RAID 6 to protect data in the case of two simultaneous hard drive failures. A single-controller version is also available.
- Supermicro has released four new UIO (Universal I/O) SAS RAID adapters. Based on Intel's 1.2GHz "Sunrise Lake" IOP348 I/O storage-system-on-a-chip processor, the cards provide fast SAS and SATA performance, including RAID 5 writes. The

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8-port cards support RAID 0, 1, and 10, with some cards sporting external ports and/or support for RAID 5 and 6. The UIO SAS RAID adapters include the AOC-USAS-S4i, AOC-USAS-S4iR, AOC-USAS-S8i, and AOC-USAS-S8iR.

#### Workstation

- Hypercom launched the Optimum T4200 series of 32-bit multiapplication electronic payment terminals. All Optimum T4200 devices feature a 32-bit ARM 9 processor, adaptive application architecture for fast multiapplication processing, a fast V.34 modem, a 19-key keypad, a fast roll thermal printer, and Hypercom's wizardstyle user interface. Other features include a standard software toolkit, an optional privacy shield, support for EMV Level 1 and 2 global payment standard, RoHS compliance, external PIN pad connections, and an RS-232 port for external contactless and check readers. Three models also include integrated smart card readers.
- Neoware has announced that its thinclient devices will now operate on a new technology platform for thin clients. The upgraded products include the Neoware c50, Neoware e90, and Neoware e140 thin-client devices, which now offer more memory and higher performance without an increase in cost. The c50, e90, and e140 include DDR2, and the e90 has a wireless option (fully integrated with no external antenna).

#### Components

■ Addonics announced the Diamond Hard Drive kit, which features built-in eSATA and SATA connectors to offer multiple connection possibilities. Customers can use Go to Page 19

Racks & Cabinets

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**Power** 

Continued from Page 18

the eSATA connector to attach the hard drive kit to a PC externally, or they can use the drive cradle to mount the kit inside a 5.25-inch drive bay. The kit supports 2.5inch SATA drives (thanks to an optional hard drive mounting bracket), along with DOS, Win95/98SE/Me/NT/2000/XP/Vista, Mac, Linux, and Solaris in external eSATA mode. The kits are built from heavy-gauge aluminum and protect the hard drive's power and data connectors from the usual wear and tear. USB mode is supported with Win98SE/Me/2000/XP/Vista, Mac, Linux, and Solaris.

■ Agilent has introduced a PCIe-GPIB half-height interface card for compact, next-gen PCs which utilize the fast datatransfer rate of PCI-E to support highbandwidth PC applications. The 82351A card offers 13 high-performance connectivity uses, the company says, as well as a 1.4MBps data rate in a 68.9mm plug-in card. Additionally, the card offers the ability to up-plug, which lets a user fit the x1 card into x4 and x8 card slots. The Agilent 82351A card is available starting at \$529.

■ Intel announced two new Digital TV demodulators designed for consumer electronic devices. The Intel CE 6250 Dual Channel COFDM and Intel CE 6251 Dual Channel Diversity-Enabled COFDM demodulators offer advanced digital home entertainment capabilities for consumer entertainment devices, such as PVRs (personal video recorders), set-top boxes, integrated digital televisions, and TV-enabled PCs. The Intel CE 6250 Dual Channel COFDM Demodulator is a single-chip device that lets users watch one program while recording another. The Intel CE 6251 Dual Channel Diversity-Enabled COFDM Demodulator lets users detach a portable DTV with two portable aerials from its traditional TV aerial lead and reposition it at any location in the home. Both demodulators are NorDig Unified 1.0.2-compliant.

■ Palm released the Foleo, the company's first smartphone companion device. The device includes a screen and full-sized keyboard for viewing and editing email and office documents stored on a smartphone. Work conducted on the Foleo is automatically synced with the paired smartphone and vice versa. Users can pair the Foleo and smartphone immediately with the press of a button or configure the devices to stay synced throughout the day. Palm says the Foleo features quick navigation, a compact design, and up to five hours of battery life and includes an email application, full-screen browser, and various document editors or viewers. The Foleo syncs with smartphones via Bluetooth or built-in Wi-Fi. The Foleo will be available this summer for an expected \$499, following an introductory \$100 rebate.

■ Samsung has developed a 4GB moviMCP (multichip package) product designed for mobile phones, which the company claims makes an external memory card slot obsolete. The company says the package also eliminates the need to develop interface software for all NAND memory types. Samsung says the multichip package's memory feature satisfies high-speed transmission needs of mobile phones, while also supporting communication features in handsets. In addition to the 4GB embedded memory card, the moviMCP includes two 16Gb NAND flash chips, a controller, a 1Gb mobile DRAM chip that supports the processor, and a 2Gb NAND flash chip for basic handset operations. The package uses the eMMC standard.

#### SOFTWARE

#### **Application & Web Development**

■ Adobe announced the public beta of Adobe ColdFusion 8 software, which is a feature-complete preview that gives developers increased efficiency and simplicity when building Internet applications. Cold-Fusion 8 leverages Adobe Flex technology and Ajax-based components, and the development environment also features Eclipsebased wizards and debugging functionality. The ColdFusion 8 Server Monitor lets developers identify bottlenecks and tune the server for better performance. ColdFusion 8 integrates with .NET assemblies and offers support for Windows Vista and new J2EE servers, including Jboss. ColdFusion 8 delivers performance gains over ColdFusion MX 7 and earlier versions of the product. Additionally, ColdFusion 8 applications interact with Adobe PDF documents and forms.

#### **Business Productivity**

■ Adobe introduced Adobe LiveCycle ES (Enterprise Suite), which makes use of Adobe Flex, Adobe PDF technologies, Adobe Flash Player, and Adobe Reader to provide applications that connect people inside and outside the organization to internal information and processes. LiveCycle ES includes scalable components to build, manage, and optimize customer-facing processes. Now, organizations can use wizard-like Form Guides and Flash-based graphics to change the way users interact with the process of providing or receiving information

online. Once data is captured, LiveCycle ES automates the processing of that data, including integration with rules engines, data stores, and Web services. Additionally, LiveCycle ES offers rights management, document certification, and digital signature capabilities to help organizations protect sensitive information. LiveCycle ES will be available in two editions: LiveCycle ES Business Transformation Edition and Live-Cycle ES Data Capture Edition. These editions give customers the option of purchasing a base system to which they can add solution components or purchasing several of the solution components in one package with a single price.

■ Mindjet released MindManager 7, the latest version of its visualization software, as well as Project Management Jetpack and an online map gallery. The software better integrates with Microsoft Office and features a redesigned UI offering logically grouped tabs, new map styles and galleries, and saved queries and views. Mac users can take advantage of some new MindManager 7 features, such as the ability to print large maps across multiple pages. MindManager 7 for Macs can also print headers and footers on maps. MindManager Pro 7 is available for \$349 with an upgrade price of \$179; MindManager 7 Mac is available for \$129 with an upgrade price of \$69; and MindManager Lite 7 is available for \$99. Customers can get the Management Jetpack free with MindManager Pro for a limited time.

#### **Data Communications**

■ 3DLabs' new DMS Scaler media processor accommodates a growing number of Go to Page 20

**POWER PROTECTION** 

March 30, 2007

## **Protecting Critical Data Center Loads**

Staco TreStar P Series UPSes Eliminate Overloads, Flicker & More In Real Time

THE STACO TRESTAR P SERIES of UPSes is designed to meet the power protection needs of today's most sensitive critical loads. The P Series' new digital control

system eliminates all overloads, frequency variations, transients, flicker, and blackouts in real time. And it processes signals 10 times faster than previous analog methods.

UPS reliability begins with design. With a true online, double-conversion design, the TreStar P Series isolates your connected loads from utility power and provides clean, regulated

output voltage and frequency.

The TreStar P Series was designed with the end user in mind. It offers the highest quality, along with the reliability you expect. It is easy to install and has a userfriendly front control panel with an easyto-read LCD menu. Its advanced battery management system reduces the frequency of maintenance and replacement schedules, saving you time and money.

Staco TreStar P Series

125-150kVA model

Staco's TreStar P Series comes in two versions: 125-150kVA and 180-225kVA. The 125-150kVA is parallelable for capacity or redundancy, with up to eight modules, and features a 0.9 output power factor, vector-controlled IGBT inverter, input circuit breaker, internal maintenance bypass, advanced battery management, and an optional 7% harmonic filter.

> In addition to all the features found on the 125-150 model, the 180-225kVA model also features state-of-the-art communications, matching battery cabinets with internal disconnect, top and bottom cable entry, and a standard 7% harmonic filter.

Other optional features include:

- SNMP Adapter
- External Maintenance Bypass
- Parallel kit
- Network Solutions software
- Extended battery runtimes
- Extended warranties
- Preventative maintenance

True online, double-conversion UPS with a digital control system designed to process signals faster than analog methods

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Power Management **APRIL 27, 2007** 

## **Affordable Power Management** With IPV42/70 Series

**Power Control & Environmental Monitoring Devices From Pulizzi** 

EVERY DATA CENTER is confronted with distributing, controlling, managing, and monitoring electrical power to all the devices in its racks. For some IT personnel, remote access becomes essential to handle multiple locations. There have always been products that could handle one or more of these tasks, but now data center managers can have it all.

The IPV42/70 series (so named because they come in either 42- or 70-inch heights) Intelligent Power Controllers from Pulizzi Engineering cover all these points. Every aspect of each outlet can be viewed locally, via a digital meter, or remotely, via Web browser, Telnet, or SNMP software. Out of the box, the IPV42/70 series can monitor voltage and current but, with an optional environmental sensor kit, can be expanded to include data on temperature and humidity. There are additional inputs allowing for integration of switches to detect rack enclosure events, and the software interface is feature-rich.

The software can be configured either to work with SNMP management software by sending traps or to send email alerts when triggered by an event. Each unit, outlet, and sensor can be named in software for a user-friendly interface, and there is a provision for multiple user logins for remote access. Pulizzi Engineering highlights the

versatility of this line by enabling users to specify certain characteristics at order to suit an array of applications. Customizable attributes include voltage, current, number of outlets, and connector types.

Pulizzi Engineering is an ISO 9001:2000-certified company that designs and manufactures its products in the U.S. It has a reputation for high quality that has won the company business from many Fortune 500 companies, as well

as some government agencies. This quality is evident in its products, which meet objectives and certifications such as RoHS, UL safety specifications, and CE directives.

Pulizzi Engineering IPV42/70 Series Intelligent Power Controllers

Start at \$799

Distribution, control, management, and monitoring in a single device

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www.Processor.com/IPV-42-70



Continued from Page 19 high-definition televisions at their native 1080p resolution without the need for separate scaling hardware. The Scaler can manipulate standard video definition and

#### **Imaging & Printing**

encode it to 1080p TV screens.

■ Adobe announced Adobe Acrobat 3D Version 8. With Acrobat 3D 8, users can convert nearly any 3D CAD file into a single PDF document. The PDF file can maintain precise geometry or can be compressed more than 100 times smaller than the original file. Users can also combine 3D CAD data with project information, such as product specifications, spreadsheets, and bills of materials, into a secure PDF document. When enabled by Acrobat 3D 8, Adobe Reader users can collaborate on the project using comment, measurement, and crosssection tools directly on 3D objects in PDF files. Acrobat 3D Version 8 supports conversion to 3D PDF from more than 40 formats. The software also lets users export precise manufacturing CAD data from PDF into neutral file formats for downstream processes, including machining operations, and tool and mold design.

#### Messaging & Groupware

- Cloudmark has released Cloudmark Gateway, a new carrier-class edge mail transfer agent for its Cloudmark Authority messaging security product. Available as software or as part of an appliance, Cloudmark Gateway reduces systemwide email volume by filtering out spam at the edge before they hit the network.
- The **Neverfail Group** released an application module eXtension for Microsoft

Forefront for Exchange Servers, an antivirus application that protects Exchange 2007 environments. The application module eXtension for Forefront works in conjunction with Neverfail Version 5.1 for Exchange to protect all security services and configuration information. It monitors email and server environments, as well as applications, the operating system, and physical server hardware.

#### Mobility

■ Agilent announced Signal Studio for 3GPP LTE (Long Term Evolution), PC-based software for its N5182A MXG and E4438C ESG vector signal generators that allows testing of 3GPP LTE mobile communications products. It's intended for wireless research/development and manufacturing engineers, Agilent says. Prices run from \$3,000 to \$4,000.

#### Network & Systems Management

■ eIQnetworks introduced the latest iteration of its SecureVue platform, designed to help administrators streamline compliance and more easily manage network and security operations. SecureVue 2.5 delivers improved interdepartmental collaboration by bringing traditionally separate data together. SecureVue 2.5 offers end-to-end correlation, compliance reporting, best practices capabilities, and process automation to large organizations, MSSPs (managed security service providers), and government institutions. Enhanced functions available in the newest version include NetFlow Analytics, Compliance Portal, Generic Parser, Automated Asset Discovery, "QuickView" Insight, and Advanced Visualization. The software works with both Linux and Windows operating environments and is available starting at \$49,995.

■ SearchInform released SearchInform 4.0.09, software that indexes data and changes on intranet computers. Version 4.0.09 uses an agent program to track all changes on each computer and record that data into a log file. Instead of scanning the entire computer, SearchInform 4.0.09 only scans the log file created by the agent program, resulting in faster index updating speed. Additionally, version 4.0.09 indexes all data, regardless of whether the folder is in common access. The indexed data is stored on the server so administrators can search through the data archives, and if certain files were deleted from the computer by accident, customers can retrieve the data from storage. The size of the storage and the time intervals throughout which the information will be stored in it are defined

■ ToutVirtual released the VirtualIQ Pro plug-and-play software appliance and the VirtualIQ Pro software to enable real-time monitoring, host and virtual machine performance management, capacity planning, and faster root-cause analysis. The products support virtualization platforms available from VMware, Microsoft, XenSource, and Novell. The VirtualIQ Pro software appliance supports up to 10 CPUs (sockets) or up to 50 virtual machines. The VirtualIQ Pro software solution pricing is based on the number of CPUs and virtual machines. VirtualIQ Pro products are hypervisor-agnostic and can be installed on either Windows or Linux OSes.

■ 2X released its ApplicationServer v.5 Small Business Edition, designed to provide

Citrix-like functionality without user or connection limitation for single Windows Terminal Servers. ApplicationServer v.5 is designed for entrepreneurs running small businesses and lets the user securely access applications and data from any location. 2X's ApplicationServer lets you publish and manage Windows applications on remote Windows, Mac, or Linux desktops. The application only needs to be installed on the server, and the software transmits screen updates rather than client server data to provide secure access. For companies and organizations with more than one terminal server or server farms, ApplicationServer v5 is available in an Enterprise Edition.

#### **Operating System**

■ Red Hat's Fedora Project has launched version 7 of Fedora, its community-supported, open-source operating system software, for complete customization by users. The source code is hosted in a public control system and built using external, open-source tools that are granted access to the entire Fedora user base.

#### Security

- Centennial Software has released its latest enterprise endpoint security product, Centennial DeviceWall 4.6. The company says that version 4.6 has been optimized for CMF (content management and filtering) and DLP (data loss prevention) suites, mainly so that other security software vendors can easily integrate DeviceWall into existing products. Centennial DeviceWall 4.6 comes in both Standard and Content Aware editions that are customizable for specific OEMs.
- Finjan's new Vital Security Version 8.5 provides real-time protection against

STORAGE June 8, 2007 WIRELESS June 8, 2007

by the user.

# **Protecting Your Exchange Server**

When Email Goes Down, Heads Will Roll

**EMAIL IS THE MOST** widely used online application for most companies. The average business user sends and receives 137 emails per day. When email goes down, businesses lose money.

Using traditional technologies to recover a single email message can take hours, and rebuilding an entire email server can take a day or longer. Now, one company has solved the data protection problems of the past and at a new low price point.

NetMass offers the ServerSafe Remote Backup service, which makes backup and recovery easier, faster, and more reliable. ServerSafe replaces tape-based backup with an automated online solution that provides centralized backup of Exchange, file, and application/database servers.

With one easy solution, your data is backed up to professionally managed data centers that are disaster-hardened, temperature-controlled, highly secure, and offer exceptional business continuity.

ServerSafe can back up virtually all types of data, including live SQL, MySQL, and PostGreSQL databases, but a popular feature of the service is backing up email servers such as Exchange and Lotus Notes/Domino and applications such as Outlook.

ServerSafe features include:

Continuous data protection. With conventional backup, an Exchange database gets backed up once daily or weekly. ServerSafe features a CDP module that continuously monitors the specified data source and automatically backs up changed data offsite. CDP effectively removes the data loss vulnerabilities between scheduled

backups by allowing users to restore data from any point in time. With ServerSafe, CDP is integrated and not an add-on to be purchased, installed, and maintained.

**Speedy restores.** ServerSafe offers extremely accessible data storage—recoveries can be measured in seconds rather than hours with simple point-and-click restore.

Message Level Restore. Allows users to restore individual or group emails (at the mailbox level) without interrupting the email server. The ability to recover a single lost message quickly and easily is a boon to administrators, saving time and resources by never having to restore an entire database when they only need select emails.

**Partners.** VARs looking to add data protection capabilities to their services can sign up as a NetMass partner and begin offering online backup services in a few days.

In addition, ServerSafe offers deduplication, bare-metal restore, and versioning.

ServerSafe Total Data Protection

Starting at \$40 per month with 30-day free trial

Easy-to-manage online backup service for Exchange, SQL, databases, Linux, Windows, and more

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www.Processor.com/Netmass



# Get A Clear Wireless Signal

MetaGeek Wi-Spy 2.4x Helps Troubleshoot Interference

THE 2.4GHz BAND is getting crowded, so you need to be able to discern ever-smaller gaps in the noise. That's why MetaGeek developed the Wi-Spy 2.4x—a 2.4GHz spectrum analyzer with an external, SMA-compatible antenna and nine times the resolution of the original Wi-Spy.



MetaGeek's new Chanalyzer 2.1 software offers improved graphics and more powerful controls.

Wi-Spy is the world's smallest 2.4GHz spectrum analyzer. It's so small (and inexpensive) because it harnesses the processing power of the computer you already own. Wi-Spy is perfect for troubleshooting interference from many devices, including Wi-Fi (802.11b/g/n), microwave ovens, cordless phones, and other Zigbee and Bluetooth devices.

With the addition of a reverse-polarity SMA adapter, Wi-Spy 2.4x offers the additional functionality and accuracy of adding an external antenna. The Wi-Spy 2.4x ships with a powerful little antenna, but it's a snap to add any RP-SMA-compatible antenna you choose.

MetaGeek's new Chanalyzer 2.1 software features improved graphics; powerful new play-through controls; and an even friendlier user interface that presents a more clear and concise view of your wireless landscape. Chanalyzer 2.1 supports both the original Wi-Spy and Wi-Spy 2.4x.

Combined with the Wi-Spy spectrum analyzer, Chanalyzer will help you visualize, troubleshoot, and optimize your wireless network at the office or on the road.

Use Wi-Spy if:

- You deploy and maintain Wi-Fi networks (it's perfect for independent wireless consultants)
- Your Wi-Fi has intermittent bandwidth problems
- The microwave interferes with your Wi-Fi network
- Your network connection drops when the phone rings

#### MetaGeek Wi-Spy 2.4x

\$399

A 2.4GHz spectrum analyzer designed for troubleshooting interference from Wi-Fi (802.11 b/g/n), microwave ovens, cordless phones, and other Zigbee and Bluetooth devices

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malicious Web data by decrypting code and then analyzing and re-encrypting it within the program. Users now have control over HTTPS, HTTP, and FTP traffic and the ability to block any Web content that may enter the system with malicious purposes.

■ Metalogic Software has released Swift Auth for identity and authorization within Web 2.0 applications. Swift Auth can manage access control, event logging, and audit trails, providing both authentication and authorization protocols. A Premium edition is available for medium-sized to large businesses that support a networked environment.

Untangle gave its

■ Untangle gave its Identity Theft Blocker a boost with Web protection. The software now blocks not only phishing emails but pharming Web sites, as well. The software is available as a free upgrade and prevents users from visiting malicious Web sites that look similar to legitimate Web sites.

#### Storage

■ Neobyte Solutions released file backup software Titan Backup 1.1, which lets users schedule file backups and offers wizards that walk users through certain backup tasks. Users can create individual backup tasks for different file groups; for example, a user can create tasks that back up email files and another that backs up spreadsheets, and the tasks can run at different times, such as weekly or monthly. The software also supports incremental backups and has a built-in version control system that tracks backup archives. It also creates Zip archives and self-extracting files. Titan supports all storage devices

and offers 256-bit AES encryption. Other features include a log of backup activities for audits and the ability to run other computer jobs between backup operations. Titan Backup supports Win95/98/Me/NT/2000/XP/Vista and is available for \$39.95. Neobyte also offers a 15-day trial via its Web site.

#### **SERVICES**

#### **Multiple IT Services**

■ Lenovo Experts Live, a new around-theclock IT service developed by **Lenovo** and **IBM**, now offers services in the areas of operating system and software application, system tune-up, and Internet and network assistance. The service is available 24 hours a day, seven days a week through phone or online chat.

#### Security

■ Kodak introduced its Kodak Security Solutions suite of products, designed to help protect media rights holders from counterfeiting and piracy. The Kodak Security Solutions include proprietary technologies such as the Kodak Traceless System, which consists of forensically invisible markers that have unique material properties and handheld readers that can detect those properties. The Traceless System marker materials can be applied to a wide range of products such as inks, toners, varnishes, paper pulp, plastics, powders, pigments, liquids, and textiles. Users can apply them directly or print them via analog or digital printers. Industries that may benefit from the Kodak Security Solutions include financial, government, pharmaceutical, manufacturing, healthcare, and more.

PHYSICAL INFRASTRUCTURE

May 25, 2007

# VISTA Data Center Capacity Management

Aperture Releases A Software Add-on To Measure Consumption & Forecast Needs

DATA CENTER MANAGERS have their work cut out for them when it comes to planning for requirements in floor space, rack space, power, and cooling. The amount of time required to acquire new capacity for a data center can be excessive, and therefore planning is crucial for preventing outages and continuing to deliver services without overburdening existing resources.

Capacity management and planning is important to organizations because of the potential for saving money by increasing the efficiency of their operations. If there is too much capacity available to the data center, expenditures and maintenance will be too high. If there is not enough capacity to the data center, outages may occur and downtime can result, which is also costly. Not having enough capacity can also delay the implementation of new systems and cause schedule problems or failure to meet service level agreements.

Aperture, which specializes in software for managing data centers' physical infrastructure, has released a new software plug-in for its VISTA product, which is a complete data center infrastructure resource management system. Data center managers can now take a proactive stance toward capacity planning because the software gives them the ability to forecast the needs of the data center well in advance.

By taking advantage of the usage forecasting capabilities of the VISTA software, users can also save money by avoiding hazards such as the need for temporary solutions to capacity shortages (leasing space at another facility, for instance). They can forecast when key data center resources will run out, so they can plan ahead and minimize or prevent disruptions. In addition to forecasting future needs based on historical usage, users also have the ability to model planned projects and see their potential impact on existing infrastructure. Users can also allocate capacity within the data center to configurable units for budgeting purposes, which gives an added degree of flexibility.

VISTA is the first full-function capacity management tool. Developed with input from Aperture's Fortune 100 customers, it lets data centers adapt quickly to changing demands and run more efficiently.

Aperture Technologies VISTA Capacity Management

Starts around \$30,000

Helps data center managers track and manage capacity at greater levels of detail

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#### **OPINIONS**

INFO-TECH • INSIGHT

# **Enough With The Stolen Laptops Already!**

Is it just me, or is anyone else sick and tired of hearing about data being put at risk as a result of lost or stolen laptops? In March alone there were three notable events—one in each of the United States, the UK, and Canada—that put data from almost 30,000 people at risk. Granted, this is a drop in the bucket compared to other events, but when is enough enough?

#### The Numbers Game

According to the latest Computer Security Institute/FBI "Computer Crime and Security Survey," laptop theft is now the second most common form of threat/attack experienced by survey respondents. Further, the dollar value of those losses averaged \$30,000 last year, up from \$20,000 in 2005.

That doesn't take into account that laptop prices fell through the floor. So if 2005's average loss was \$17,000 (assuming a \$3,000 replacement cost on the notebook itself) and 2006's was \$28,500 (assuming a \$1,500 notebook replacement cost), we lost data worth 68% more to laptop theft than just one year earlier.

#### The Blame Game

So we've established that it's a problem, but whose problem is it? Is the enterprise responsible, or does the fault rest with the employee? This is a situation where there is enough blame to go around, where everyone is party to the problem.

The employer invariably does not provide the right tools, processes, and motivations

to keep the laptop secure in the first place. While the device may be in the possession of the employee, it is not a possession of the employee. And neither is the information it holds. This belongs, or has been entrusted, to the enterprise, and it is the enterprise's job to ensure it is protected.

Ultimately, the employee must bear the majority of the blame, however, because the loss occurred while the laptop

was under her stewardship. Most often, these devices are stolen out of cars or when left unattended. Employees are being too flippant, lazy, or just plain thoughtless about protecting these devices and the information they contain.

#### What Can The Enterprise Do?

Even though the enterprise shouldn't bear the brunt of the blame, it must provide tools and processes that help the laptop be more secure.

The enterprise must provide tools and processes that help the laptop be more secure.

**Don't issue the laptop.** The best way to ensure that laptops stay safe is not using them. Some employees need the flexibility of working anywhere, but laptops are issued too regularly. If it's a convenience

James Quin is a senior research analyst with Info-Tech Research Group. James has worked in the IT field for more than 10 years, specializing in IT security services. James holds a B.A., an Honors B.Sc., and an M.Sc. from the University of Toronto.

JAMES DUIN

and not a necessity, then provide a desktop instead. It's safer and cheaper.

Secure the laptop. If a laptop is necessary, make sure it's physically protected whenever possible. Supply a cable lock, show employees how it works, and mandate its use. Also, don't issue generic-looking computer bags—they're a dead giveaway.

Limit the data. Since the true concern is the data rather than the device, restrict what information is allowed to walk out of the door in the first place. This means data must first be classified so that policy can be set around what is allowed on the laptop.

**Back up the data.** If you're going to let data go wandering, you'd better make sure that it's not the only copy. Whether the data is also stored on a LAN drive or a backup

tape (or better yet, both) doesn't matter just as long as it is recoverable.

**Encrypt the data.** If data is allowed onto insecure laptop hard drives, then encrypting it is essential. That way, if the laptop is lost, the data isn't put at risk. Encryption has been available in Windows since 2000, so there's no reason for the enterprise not to use it.

Wipe the data; track the laptop. As-

suming the laptop is lost, steps can still be taken. Services exist that can remotely wipe out the data, while others can track and locate the laptop. The solutions have limitations, however, so they shouldn't be relied on as the only defense.

#### It Comes Down To The User

Buying and implementing tools is the easy part; making the employees care enough to use them is much more diffi-

cult. Speaking realistically, the only way to make the user protect the device is to make sure he has some "skin in the game."

Simply put, if an employee has a laptop lost or stolen and he can't prove it was appropriately protected (say, with a cutthrough cable lock), put him on the hook for the replacement cost. Draconian? Perhaps, but it'll make the people who have laptops significantly more careful if they know losing them would cost them personally. And, at the end of the day, isn't that what we're trying to achieve?

Besides, it's not like we're making them repay the value of the lost data as well....

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# Liquid Cooling In The Data Center

#### An Update Of Products & Technology Designed To Beat The Heat

by Kurt Marko

THE INEXORABLE INCREASE in microprocessor speed and complexity is the foundation upon which the panoply of computing and communication devices powering this information age is built. The nasty side effect of denser CPUs with higher clock speeds is the result of an electronic form of friction—electrical signals (however small) travel over wires (however microscopic) with resistive and capacitive loads—a process requiring energy that is ultimately dissipated as heat. The faster signals are switched, the more power (energy per unit of time) is required.

Perusing Intel's (www.intel.com) CPU data sheets during the past few years illustrates the problem. A now-ancient 75MHz Pentium didn't use much more power than a night light, a mere 8W. A state-of-the-art, quad-core Core 2 Q6600 runs a blistering 105W, while many high-end Athlon X2's top that at 125W. Compounding the problem is dense 1U or blade server packaging, often with two CPUs per server, putting more processors in each rack. The net result is that it's not uncommon for server racks full of high-density systems to consume more than 15kW, with projections upwards of 24 to 48kW per rack—translating to more than 4kW per square foot-by



SprayCool's In-Chassis Cooling Module (www.spraycool.com) has cold plates with piping for cold input and hot return.

2010. Getting this amount of heat away from sensitive components before they incinerate is a significant challenge.

#### Why Liquid?

Recollecting from high school physics, remember that materials have a wide variety of heat-absorption capabilities.

Unfortunately, gases (read: air) are at the low end of the spectrum—thus, it's difficult to transfer much heat through air without a lot of airflow. According to Herb Villa, IT product specialist at enclosure manufacturer Rittal (www.Processor.com/Rittal), "Water is 3,500 times more efficient at transferring and transporting heat than plain old air." In addition, as Peter Koch, CTO at Knürr (www.knuerr.com), notes, the heat transfer from a solid to liquid is magnitudes better than that to air. Thus, vendors have developed a variety of products that bring liquid's heat transfer advantage closer to the heat source.

#### **Product Categories**

Patchen Noelke, director of marketing at SprayCool (www.spraycool.com), describes the cooling market as a four-layer hierarchy. In-room cooling is the most basic level, encompassing traditional HVAC systems using forced air, while inrow products consist of self-contained cooling units placed adjacent to high-density servers. In-row units still rely on airflow through a rack for heat transfer; however, the cool air source and hot air return are in closer proximity to the heat source.

In-rack products, the next layer in Noelke's hierarchy, build a cooling unit directly into the enclosure, often replacing a rack door, such as in IBM's Cool Blue Rear Door Heat eXchanger (www .ibm.com). This has the advantage of completely isolating a hot rack from the room environment and channeling cool air through the enclosure, making it suitable for both blades and 1U servers. The final category of cooling product, so-called inchassis, or chip-level coolers, brings liquid's heat removal properties directly to the heat culprit—the CPU. These units replace the traditional radiator-like metal heatsink on a microprocessor with a liquid-filled cold plate that circulates to an external heat exchanger.

#### **Interesting New Products**

A number of companies, from behemoths such as IBM to niche specialists such as SprayCool and Rittal, have developed innovative products to address the burgeoning need for heat removal in high-density racks. Villa of Rittal points to the company's

next-generation Liquid Cooling Package, the LCP+, which features a 30kW capacity, noting, "in addition to providing the greater load capacity, airflow and water flow control has been improved, as well as onboard and remote monitoring and

in 2002 and is on its third generation of design.
Using liquid cooling for the CPU is an

Using liquid cooling for the CPU is an old technique introduced years ago in supercomputers such as the Cray-1 and lately popular in high-end gaming PCs. Inchassis cooling systems, such as the SprayCool M Series and similar products such as Knürr's CPU Cooling System or that used in Pyramid Computer's Cluster Server (www.Processor.com/Pyramid-USA), marry a cold plate on the processor with a rack-mounted manifold and heat exchanger. According to Noelke, a highlight of SprayCool's system is the use of leak-proof quick connects for all hoses and

Materials have a wide variety of heatabsorption capabilities. Unfortunately, gases (read: air) are at the low end of the spectrum—thus, it's difficult to transfer much heat through air without a lot of airflow.

control capabilities," along with the ability to cool one or two cabinets per unit. Rittal OEMs its product to a number of server and storage vendors, including Dell (www.dell.com), IBM, and NetApp (www.Processor.com/NetworkAppliance), and is used in HP's (www.hp.com) MCS (Modular Cooling System).

The CoolTherm is a similar in-rack product from Knürr, acquired last year by Emerson (www.Processor.com/Emerson-Liebert) and used in Liebert's X-Treme Density line of enclosures, which comes in four models ranging in cooling capacity from 10 to 35kW per rack. Koch points

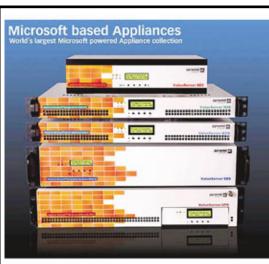


Knürr's (www.knuerr.com) CoolTherm In-Rack Cooling Product includes fans that are mounted in rack doors with a closed circulation heat exchanger at the bottom. They connect to a building's chilled water system so that dissipated heat is not added to the room's thermal load. a special nontoxic, dielectric fluid that won't damage electronics in the unlikely event of a spill. Heat exchangers on inchassis systems are typically located at the bottom of the rack and connect to the computer room's chilled water system.

While ostensibly targeted at large installations with high-density racks, Noelke feels that the SME market is actually a sweet spot because SMEs often have equipment located in office areas not designed as computer rooms and thus difficult to expand with auxiliary conventional forcedair cooling. He remarks that the efficiency and compactness of in-chassis systems can enable smaller companies "to double the number of servers in a convenient location." Furthermore, he feels that in-chassis systems are the most efficient means of heat removal, noting that they can cool a 12kW rack with only 200W, saving up to 20% in energy costs.

#### **Cooling Of The Future**

While CPU manufacturers seem committed to improving the power efficiency of new designs, as witnessed by Intel's proclamation that its latest Xeon chips usher in "a new era of power efficiency," the increasing number of processor cores per chip will likely erode these gains, as will the continued push to high-density server packaging. Thus, the need for heat removal in crowded 1U or blade server racks will escalate and exceed the physical limits of conventional room-level, forced-air systems. Liquidcooling solutions, whether tightly integrated with an equipment rack or embedded within the server, are the most promising solution for taking the heat off of such consolidated, high-density servers.



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# Staying Connected

#### **Disaster Recovery** For Email

by Sandra Kay Miller

ALERT: FAILED TO CONNECT to mail server. That simple message can equally strike fear into SMEs and global enterprises alike when it persists for more than a few minutes. Paul D'Arcy, vice president of marketing for MessageOne, points out that statistically, this year alone 75% of organizations will experience an unexpected significant email outage lasting an average of 26 hours. A little more than a chronological day, that time can seem like an eternity and include a bevy of financial, as well as legal, ramifications.

Today, mail servers do much more than send simple text messages. "Microsoft has created a platform around which people

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manage their entire communication infrastructure," explains Steve Lewis, co-founder and CEO of Teneros, which offers automated application continuity appliances for Microsoft Exchange (www.microsoft.com). "I've never had a land line go down on me, but 80% of corporate users would rather lose their land line than their email," says Lewis.

When the mail server goes offline, most employees lose their primary form of communication. If the organization utilizes some type of mobility solution, such as Black-Berrys (www.Processor.com/RIM), functionality will still be crippled. Lewis points out that despite wanting to continue working, often as much as 75% of critical data needed for productivity resides on the mail server.

If Internet capabilities persist, D'Arcy sees employees turning to Web-based email accounts such as Gmail (gmail.google.com) and Yahoo! (mail.yahoo.com) to maintain business communication. Due to the lack of archival capabilities, this leads to compliance issues and serious repercussions should any business-related private emails be requested during e-discovery in legal proceedings.

Given the added risks of compliance in addition to business continuity, recovery times are shrinking. "Today, when something locally has failed, your standard should be no downtime," says Lewis. For true disasters where the entire location is lost, such as a natural disaster, offsite DR (disaster recovery) solutions should have users back online in less than 20 minutes.

#### Where To Begin

Email is often rolled into comprehensive DR plans for large enterprises, but few SMEs can afford the costs of keeping offsite mirrors of their data, let alone their entire email

infrastructures. From something as simple as a local error, such as a failed application or hardware, to the ultimate loss of an entire site, organizations need to ensure that they are capable of restoring email and other unified messaging systems as soon as possible based upon their businesses' requirements.

As with practically every project, though, the ultimate decision boils down to the budget. For Lewis, the first step is to determine how much of the unified communications system should be included in a DR plan. "For simple email, it should be straightforward, but if you want to have BlackBerry servers, VoIP servers, archiving compliance solutions, and backup at your DR site, then that's a lot of infrastructure that you can't do in a closet at a satellite branch and is expensive." Next, organizations should ask how much they can not afford to include in their disaster recovery plans. For those bound by regulatory compliance, that means including all related systems where others may not require that level of recovery capacity. "The determination around how much protection is needed is really a business judgment based upon what business you're in," says Lewis.

Many SMEs are turning to managed email services, such as MessageOne and SunGard, which provide DR. By outsourcing critical DR functions, SMEs are able to concentrate on their core business and still have a solid recovery plan for mail server failure.

#### **Preventive Measures**

Not all email server outages are caused by backhoes or hurricanes; some are caused by poor administrative practices and I/O thrash-continuous calls made to a mail server. Lewis warns that as more organizations deploy mobile devices, the overhead to support the constant calls on a mail server can lead to instability.

Another culprit of mail server downtime is bad email hygiene. "Email servers hate to be throttled, and their databases don't like to be

**JUNE 15, 2007** 

used as databases. They were not meant to be a file store," says Lewis. He suggests keeping relatively small email boxes. "If you've got 200 to 300MB per user, you're fine, but if you let that grow to 10GB, the I/O thrash on that mail server literally exponentiates." Additionally, Lewis suggests keeping the external data bus sizes manageable (600GB at most) and implementing good archiving.

Lewis attributes a whopping 60% of Exchange server downtime to poor administration. "The administration of these systems is ordinately complex, and it's going to get worse with Exchange 2007." To compensate, organizations should strive for stability and limit change. Lewis lists change (patches, new administrators, mergers) as central to mail server instability. "When I find Exchange environments that aren't working well, I often ask how many administrators they've had in the last couple years, and it tends to be more than one."

Business is hinged upon the ability to communicate. Email has become so vital to communication that being down for even minutes can impact your organization financially and possibly legally. It's well worth the effort to have a DR plan in place, regardless of the cause for mail server downtime.

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# **Encryption Secures Data At Risk**

#### **Disk-Level Encryption Platforms Can Provide Easy Compliance & Risk Management**

by Darrell Dunn

IN THE PAST TWO AND A HALF YEARS there have been more than 500 data breaches in the United States involving the exposure of more than 155 million records containing sensitive personal information, according to consumer advocacy group Privacy Rights Clearinghouse.

"There are only a couple of reasons why people do anything in security: Someone has told them they have to, or they've been hacked," says Paul Stamp, an analyst with Forrester Research. "Encryption is an insurance policy, and encryption can cover a multitude of sins. Security concerns and requirements will get worse before they get any better."

#### **Know Your Data**

Businesses most often targeted for direct hacking attacks for data theft tend to be the

#### **Choose Wisely**

The potential of security breach and level of data sensitivity can guide a decision on what level of encryption is necessary for an

Most encryption products meet at least some level of DES (Data Encryption Standard), which was adopted as an FIPS (Federal Information Processing Standard) in the United States in 1976. DES has been supplanted by TDES (Triple DES) and now the AES (Advanced Encryption Standard), which provides 128-bit to 256-bit encryption.

TDES systems continue to be sufficient for most commercial applications, says Randy Barber, president of CRU-DataPort (www .Processor.com/CRU), a provider of encrypted drive technology. "AES is really for those requiring the highest level of security because the government is an end user. They are trying to protect data not just for the immediate future but for decades and from countries and organizations with huge amounts of money, technology, and resources," he notes.

Eric Skinner, chief technology officer for data protection specialist Entrust (www.Pro cessor.com/Entrust1), says systems that meet FIPS evaluation are sufficient for most enterprises.

"I wouldn't be comfortable with a 64-bit implementation anymore, but 128- and 256-bit is very strong," Skinner says.

largest. Loss of data due to misplaced or stolen computers, PDAs, hard drives, backup tapes or disks, or other removable data cuts across all enterprise shapes and types.

"Loss or theft of mobile devices is the No. 1 problem, and yet I still see companies that have done nothing. And in some cases they're trying to get out of doing anyloss if they can show the data was encrypted at a disk level.

#### **Know Your Options**

Randy Barber, president of CRU-DataPort (www.Processor.com/CRU), a maker of removable hard drive enclosures, believes software-only approaches can lead to holes in the security safety net. Some software applications encrypt data only at the file level for data-in-transit or data on storage arrays, but more than half of are setting yourself up for problems," Skinner says.

Skinner also believes in a universal encryption strategy. He expects improvement during the next few years in content analysis software that can assign encryption to certain files based on filtering techniques but believes enterprises are more secure with disk-level encryption.

#### Windows' New Encryption

Improved encryption capabilities are part of the Enterprise and Ultimate versions of the recently introduced Windows Vista operating system from Microsoft (www .microsoft.com) and will be part of the upcoming Windows Server Longhorn platforms. The suites include Windows BitLocker Drive Encryption. BitLocker enables drive encryption and the integrity checking of early boot components. It encrypts all user and system files on the drive as long as the drive remains in the original PC.

computer.

Integrity checking of the early boot components helps to ensure that data decryption is performed only if those components appear unmolested and that the encrypted drive is still in the original

#### **Data Protection At Center Of Privacy Debate**

Many of the top privacy issues facing businesses and individuals relate to data security, according to the Privacy Rights Clearinghouse. Here is a list of its "top privacy issues."

- · Biometrics
- · Video surveillance
- · Online privacy and ecommerce
- · Workplace monitoring
- · Wireless communications and location tracking
- · Data profiling
- · Identity theft
- · Background checks
- · Information broker industry
- · Public records on the Internet
- · Financial data
- · Medical records
- · Wiretapping and electronic surveillance
- · Youth privacy issues
- Digital rights management
- · Digital TV and broadcast cable TV
- RFID Real ID

SOURCE: PRIVACY RIGHTS CLEARINGHOUSE

### "Loss or theft of mobile devices is the No. 1 problem, and yet I still see companies that have done nothing."

- Gartner's John Girard

thing, and making excuses," says John Girard, an analyst with Gartner.

Businesses involved in healthcare and financial services have regulations requiring the encryption of patient or customer information, and those working under a government contract must meet encryption requirements. Of course, no company wants the negative publicity associated with the loss of customer data. Some small companies are able to utilize security capabilities found within existing operating system platforms. Many businesses wrestle with whether to choose an encryption strategy that targets only information identified as critical or to take a more "scorched Earth" approach.

"By the time you walk through a few questions about what is sensitive and what is not, most businesses come to realize it's all sensitive," Girard says. "And it's certainly very hard to make a decision ahead of time and know on an ongoing basis what is sensitive information and what is not."

"You need security where your data is," says Brian Foster, senior director of product management responsible for endpoint security products at Symantec (www .Processor.com/SymantecCorp). "More and more businesses are extending their enterprise and extending interactions with partners and employees. That's opening up access to data everywhere, and you have to secure the data and secure the access."

The loss of 26.5 million unencrypted records of military records by the U.S. Department of Veterans Affairs last year has promoted heightened debate on federal encryption regulations. Dozens of states have enacted or are considering legislation concerning the loss of encrypted data. In some states, businesses can avoid disclosure of a written onto the drive or read from the drive," Barber says. "The system overhead to do the encryption amounts to zero, and

network data resides inside the enterprise,

and too few organizations are taking time

"With our approach, all the data is

encrypted in hardware literally as it is being

to encrypt stored data, he says.

you don't have to worry about someone having to do something to make sure the data is protected."

CRU-DataPort offers encryption systems ranging in price from \$70 for an encrypted PCI card to a 128-bit TDES (Triple Data Encryption Standard) removable drive priced at about \$200 per workstation.

Reliance solely on password-protected encryption is inadequate because hard drives can be easily removed in most computing platforms. Disk-level encryption can ensure security even if traditional hard drive access requirements are circumvented.

The company also offers a removable 2.5-inch encrypted hard drive that fits into a standard PC bay. When removed, the drive can be connected to a laptop using a USB port, allowing a user to maintain security on data-in-transit using a small form factor product.

Reliability of security systems and encryption can come in the form of user transparency, says Eric Skinner, chief technology officer for data security specialist Entrust (www.Processor.com/Entrust1). The more users are required to provide input to complete or initiate an encryption process, the odds of user neglect or misuse

"If you're trying to train users to encrypt things through policy and they have to take extra steps and save things to folders or click to complete functions, then you

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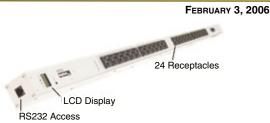
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## WHAT'S HAPPENING

# Locking Down The Corporate Network

# What's Happening In The Network Access Control Industry

by Chris A. MacKinnon

WHO IS CONTROLLING your network access? Are your managed and unmanaged network devices (including LAN, WAN, WLAN, and VPN connections) securely locked down? These days, NAC (network access control) is a security hot topic for data centers when things such as day-zero exploits (and other enterprise-based attacks) threaten the corporate network. Add to those threats the necessity of compliance mandates and the reality of increasing numbers of unmanaged and mobile devices, and it's plain to see how today's SMEs need help and guidance from security experts in the NAC industry.

#### The Industry Today

According to Dan Clark, Lockdown Network's (www.Processor.com/Lockdown) marketing vice president, the NAC market has shifted from "What is NAC?" to "Which NAC best meets my needs and supports my infrastructure?" Clark says, "There were a lot of companies who jumped into the market by adding an 'NAC' feature to an existing product without really building in the types of powerful policy controls that really define effective access control solutions." Shakeout is already starting to occur, Clark says, as these vendors are failing to get traction.

Clark says when it comes to NAC for today's SME, the key words are policy and interoperability. On the policy side, Clark explains, "NAC policy has to be able to deal with both very broad and very focused policies. For example, systems need to be able to deal with logic like 'all users must

have BrandX antivirus, signatures must be updated within 48 hours, and OS hot fixes must be installed within 72 hours of availability.' Most NAC systems can deal with this, but then you get to more precise issues, such as 'devices in the test lab may not run a DHCP server,' or 'any device connected to a port in the data center must a) be an authenticated IT user and b) pass a complete vulnerability scan, unless c) the device has been white-listed as a server.'"

On the interoperability side, Clark says this is also an issue. "Most NAC systems claim to solve way more problems than they really can. Claims like, 'we know everything about every user and device on the network,' abound, especially from inline packet inspecting appliances. But the reality is network security requires an array of different technologies that should participate in access decisions."

Clark says the Big 3 industry frameworks are trying to address this, but Lockdown thinks Microsoft NAP (network access protection) has the advantage; he says the company's approach makes it easy for third parties to integrate and deliver value. "Lockdown's approach," he says, "has been to address interoperability through support for key initiatives, like NAP, through our iNAC (intelligent NAC) partnerships with key vendors and through the ability to accept in-bound events from almost any system, like an IDS, IPS, or NBA, and write this into policy."

#### What's Happening At Lockdown

As far as Lockdown is concerned, the company is focused on providing a solution

that not only assures all devices on the network comply with policy but that policy can be applied uniformly throughout the enterprise, regardless of access point or connection method. Clark notes, "With Lockdown, you're constantly able to control, and know, who is on which devices, where on the network, and whether those devices comply with security policies. Further, Lockdown emphasizes interoperability with existing and future security and network infrastructure. We work with, or without, 802.1x-enabled switches, support wireless controllers and access points, and smoothly complement Microsoft NAP."

In the vein of uniqueness, Clark says Lockdown has developed a solution that truly scales from the core to the remote office for both large and small enterprises. He com-



ments, "Our unique combination of agent, dissolving agent, and network scanning technologies allow all devices to be checked for policy compliance without requiring installation of JAVA or use of Active X." He says this means even embedded systems and devices can be effectively assessed for compliance or that guest devices can be checked without leaving residual software on their systems that might cause problems when they return to their own networks.

Clark says Lockdown has built a number of key innovations into its NAC product, including: a Precision Policy Engine that creates both broad and focused policies specific to enterprise objectives; a proprietary scanner for fast assessment and access; support for critical network control points, such as managed switches, wireless controllers, or WAPs, without the need for network upgrades; and private quarantine for devices so that "at risk" devices are kept isolated from each other and from potentially compromised devices.

#### What's Happening Elsewhere

The obvious competitor in the NAC market, in Clark's opinion, is Cisco Clean Access (www.Processor.com/CiscoSystems). He says Cisco has dropped the old Cisco NAC and incorporated this into the NAC Appliance. "This is good for us," Clark notes, "as it validates the appliance model, and it's good for us because Cisco's goal is to upgrade switches and to drive customers to use only Cisco network and VoIP devices or face complex and inefficient deployments."

Clark says inline NAC appliances, in the meantime, have emphasized attaching some device assessment through agents to their behavioral or signature-based NAC, but this approach, he says, is limited. "They can't check nonagentable devices, often requiring Java or Active X to be used to run an agent, and don't support advanced tests, such as checking for services like DHCP servers. Inline appliances tend to duplicate IDS or IPS functions already on the network, whereas our approach is to leverage these existing resources to allow for a more flexible approach to identifying and responding to threats on the network."

Since network best practices dictate the use of multiple techniques to identify security threats, Clark says Lockdown has a clear advantage, especially as new techniques are developed to counter new types of threats, such as obfuscated payloads. Clark says Lockdown's primary focus for the rest of this year is to continue driving interoperability and scalability, supporting the ever-increasing size of NAC deployments, which will come online during the next two years. When the network is your business, you want to make sure it is locked down.

#### THREE QUESTIONS

# **Custom Servers With Low TCO**

#### **ASA Computers Delivers Affordable High-Output Servers For All**

by David Gilbert

ASA Computers (www.Processor.com/ASAComputers) situated in Santa Clara, Calif., builds and supports servers based on industry-standard components. Focusing primarily on the Intel x86 architecture, ASA Computers offers systems configured with a variety of operating system software, such as BSD, Linux, Solaris, and Microsoft Windows. ASA Computers has been in business since 1989, and its customers include individual end users, resellers, businesses, government accounts, and educational institutions. Since its inception, the company has diversified by providing system integration services to its customers, including networking and storage solutions. To this end, ASA Computers maintains a Cisco Premier Certification.

Arvind Bhargava, CEO of ASA Computers, tells us about the biggest ITrelated issues facing the industry and how his company addresses those issues for its customers.

## ■ What are the biggest IT-related issues facing today's small to midsized enterprise?

One of the main issues the IT industry is facing is getting more output per server while lowering the TCO for each server. TCO includes not only the acquisition cost of the server but also such immediate outlay as hardware and software installation costs and bandwidth charges for access to the server. Over time, additional expenses will include upgrades to the operating system and application software and hardware upgrades or parts replacement. Other expenditures that may be more difficult to quantify in advance are service charges if the server crashes, security measures for the server, and power usage fees.

A secondary issue is managing costs for the servers once they are in place. This can be hard to project without past experience but is important when it comes to staying within a set operating budget.

#### What should *Processor* readers know about your company's products?

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ASA provides server solutions specifically catered to individual customers' needs without unnecessary additional hardware costs by working with very low margins (low overhead) that are in the 6 to 8% range. ASA will test the server with its required operating system and will hold the customer's hand until the server is deployed successfully, providing dedicated customer service. ASA Computers only does servers and has been doing this since 1989, which ensures good service and commitment.

#### ■ What makes your company unique?

ASA is a medium-sized company and can adapt to new products instantly. Because of this, ASA is able to adjust its product offerings and engineering knowledge to the current IT standards very quickly. When it comes to production, ASA has a cellular line for individual customized servers and some progressive production lines for multiple server orders. ASA will also make OEM products for customers, including making brand-name systems, boxes, and blind ship for appliance makers. ASA is willing to experiment with new combinations of hardware and software for the IT people who make up its customer base. Because ASA has a reputation of working on the cutting edge of technology, the company gets the advantage of working closely with most manufacturers who are equally keen to learn about ASA's new product performance, reception, etc., and are more than willing to cooperate with ASA.

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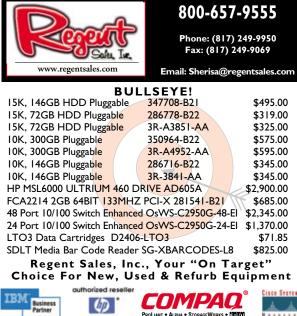
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